

NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES

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CHAPTER Env-Wq 1000 SUBDIVISION AND INDIVIDUAL SEWAGE DISPOSAL SYSTEM DESIGN RULES

Statutory Authority: RSA 485-A:4, 29, 30-b, 35, 38, 39, and 41

REVISION NOTE:

Document #9086, effective 2-9-08, readopted with amendments and renumbered former Chapter Env-Ws 1000 entitled “Subdivision and Individual Sewage Disposal System Design Rules” as Env-Wq 1000. The redesignation from subtitle Env-Ws to subtitle Env-Wq was done pursuant to a rules reorganization plan for Department rules approved by the Director of the Office of Legislative Services on 9-7-05.

The prior filings for rules in the former Env-Ws 1000, numbered Ws 1000 prior to Document #4621, include the following documents:

#611, eff 2-10-75 #4841, eff 6-19-90
#1144, eff 4-19-78 #4926, eff 9-5-90
#1382, eff 6-10-79 #5424, eff 6-24-92
#1705, eff 1-1-81 #5692, eff 8-26-93
#1729, eff 3-15-81 #5748, eff 11-30-93
#2165, eff 1-1-83 #5948, eff 1-6-95
#2842, eff 9-5-84 #5949, eff 1-6-95
#4202, eff 1-9-87 #6329, INTERIM, eff 9-6-96, EXPIRED: 1-4-97
#4255, eff 4-14-87 #6421-A, EMERGENCY, eff 1-7-97
#4564, eff 1-3-89 #6451, eff 2-8-97
#4608, eff 5-1-89 #7079, eff 8-26-99
#4621, eff 6-1-89 #8967, INTERIM, eff 8-26-07
#4622, eff 6-1-89

PART Env-Wq 1001 INTRODUCTION

Env-Wq 1001.01 Purpose. In addition to the purposes stated in RSA 485-A:1, the purpose of these rules shall be to prevent pollution of all public or private water supplies, whether underground or surface sources.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1001.02 Waivers.

(a) The rules contained in this chapter are intended to apply to a variety of conditions and uses. It is recognized that strict compliance with all rules prescribed herein may cause hardship or not fit every conceivable situation. The purpose of this section shall be to accommodate those situations.

(b) Subject to (j), below, any application filed pursuant to these rules may include one or more requests for a waiver of specific rules outlined in the chapter as set forth in this section.

(c) All requests for waivers, including requests for encroachment waivers as defined by RSA 485-A:2, III-a, shall be submitted to the department pursuant to RSA 485-A:41, IV.

(d) Each applicant’s request for a waiver shall include the following information:

- (1) A specific reference to the section of the rule for which a waiver is being sought;
- (2) A full explanation of why a waiver is necessary;

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- (3) A full explanation of the alternatives for which a waiver is sought, with backup calculations and data for support; and
 - (4) A full explanation of how the grant of the waiver is consistent with the intent of RSA 485-A.
- (e) The department shall approve a request for waiver upon finding that:
- (1) The alternatives proposed are at least equivalent to the specific requirements contained in the rule; or
 - (2) If the alternatives proposed are not equivalent to the requirements contained in the rule, they are adequate to ensure that the intent of RSA 485-A and the purpose of these rules are met.
- (f) Waivers shall be granted in writing as part of the approval, shall expire with the approval and shall be transferable with the approval.
- (g) A formal waiver request form shall be completed by the applicant which contains all of the above requirements. The owner shall co-sign and acknowledge agreement and consent to all waiver requests.
- (h) The department shall deny a request for waiver upon finding that:
- (1) The alternatives proposed are not equivalent to the specific requirements contained in the rule; or
 - (2) The alternatives proposed are not adequate to ensure that the intent of RSA 485-A and the purpose of these rules are met.
- (i) Waivers shall be denied in writing as part of the denial of the application.
- (j) As specified in RSA 485-A:41, IV, no waiver of rules relating to site loading or separation distances to ground or surface waters shall be allowed for sewage or waste disposal systems on lots in subdivisions created after September 1, 1989.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1002 DEFINITIONS

Env-Wq 1002.01 "Aeration tank" means a tank in which wastewater is brought into contact with air for the purposes of facilitating biological degradation.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.02 "Approved plans and specifications" means the approved plan, the construction approval, the operation approval, and the maintenance pamphlet published by the department, "You and Your Septic System".

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

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Env-Wq 1002.03 "Aquic conditions" means continuous or periodic saturation and reduction, as indicated, except in Histosols, by redoximorphic features, which can be verified, except in artificially drained soils, by measuring saturation and reduction.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.04 "B horizon" means a layer of soil or soil material approximately parallel to the land surface that forms below an A, E, or O horizon.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.05 "Bed" means the portion of an effluent disposal area that contains the leach lines, exclusive of any fill extensions.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.06 "Bs horizon" means a B horizon with an accumulation of illuvial, amorphous, dispersible organic matter and sesquioxides.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.07 "Bh or Bhs horizon" means a B horizon with an accumulation of illuvial, amorphous, dispersible organic matter and sesquioxides. The sesquioxide component coats sand and silt particles. The symbol "h" is used in combination with "s" as Bhs if the amount of sesquioxide component is significant but value and chroma of the horizon are 3 or less.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.08 "Biomat interface" means a biologically active layer that forms between the bottom of the bed and the fill material or receiving layer or, in the case of large diameter graveless pipe systems, on the inside of the non-woven fabric wrap.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.09 "Cesspool" means an underground pit into which is discharged raw or partially-treated sewage or other essentially untreated wastes and from which the liquid seeps or leaches into the surrounding soil. The term includes cesspit and effluent disposal cesspool.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.10 "Chamber system" means an individual sewage disposal system in which effluent is dispersed through preformed, interconnected, open bottom units that also provide effluent storage space and mechanical support for the soil overburden.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

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Env-Wq 1002.11 "Chroma" means the relative purity or saturation of a color, or its intensity of distinctive hue as related to grayness. Chroma is one of the 3 variables of color.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.12 "Cluster subdivision" means an open space/conservation subdivision.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.13 "Commercial" means any use that is not solely residential as defined in Env-Wq 1002.74.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.14 "Composite average slope" means the measurement of an incline by a single value that represents the average of a set of unequal values.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.15 "Construction approval" means written approval for construction of a proposed individual sewage disposal system.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.16 "Conventional pipe and stone system" means an individual sewage disposal system in which effluent is dispersed through small-diameter pipe that is perforated only on the lower half and that lies within a bed of septic stone.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.17 "Department" means the department of environmental services.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.18 "Department staff" means a employee or agent of the department authorized by the department to review and discuss preliminary plans and development plans, to advise on modifications, and to approve plans for, and installations of, individual sewage disposal systems for the department.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.19 "Design intent" means a statement of actual bottom elevation of the bed in relation to an established reference elevation on site, in accordance with Env-Wq 1003.06(ag).

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

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Env-Wq 1002.20 "Developed waterfront property" means "developed waterfront property" as defined in RSA 485-A:2, and includes property upon which a structure previously stood but which has burned or has otherwise been demolished.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.21 "Domicile" means that place where an individual has his or her true, fixed, and permanent home and principal establishment, and to which, whenever he or she is absent, he or she has the intention of returning. An individual might have more than one residence, but has only one domicile.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.22 "Do not backfill order" means a written notice issued by department staff to the installer of an individual sewage disposal system that has not been installed in accordance with the approved plans and specifications for that system.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.23 "Drainage swale" means a vegetated area where waters flow to such a limited extent that neither channels nor wetlands vegetation develop.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.24 "Dry well" means an effluent disposal area constructed as a covered, underground pit with an open-jointed or perforated lining and surrounded with septic stone, into which effluent is discharged for final disposal into the surrounding soil. The term includes seepage pit and effluent disposal pit.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.25 "E horizon" means a mineral soil horizon in which the main feature is loss of organic matter, silicate clay, iron, or aluminum, or some combination of these, leaving a concentration of sand and silt particles.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.26 "Effluent" means the liquid component of sewage after solids have settled out.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.27 "Effluent disposal area (EDA)" means an area designed for the final disposal of effluent, including the bed and any required fill extensions, in which effluent is dispersed using leach lines or dry wells.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

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Env-Wq 1002.28 "Encroachment waiver" means a waiver of the design specification rules of Env-Wq 1000 which, if granted, would further limit the ability of an owner of an abutting property to fully use the property for purposes of development. For purposes of this definition, "development" includes changes or additions to existing structures as well as construction of new structures, whether commercial or residential.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.29 "Expansion" means an increase in the design flow, based on Env-Wq 1008.03, over the existing design flow for an existing structure or an increase in the size of the footprint or ridgeline of an existing or former structure.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.30 "Failure" means "failure" as defined in RSA 485-A:2, IV, namely "the condition produced when a subsurface sewage or waste disposal system does not properly contain or treat sewage or causes or threatens to cause the discharge of sewage on the ground surface or into adjacent surface or ground waters."

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.31 "Free of fines" means not containing any small particles such as silts or clay.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.32 "Gleyed matrix" means a soil horizon matrix color resulting from prolonged periods of wetness that makes up more than 50% of the horizon or subhorizon where iron has been reduced and removed, or where saturation with stagnant water has preserved a reduced state.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.33 "Gallons per day (GPD)" means the standard measure of water or wastewater flow in a 24-hour period.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.34 "Grease trap" means a tank or series of tanks into which wastewater that contains grease is discharged, where grease floats to the water's surface and is retained while the water below is discharged.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.35 "Gray water" means residential wastewater other than from a urinal or a toilet.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.36 "Holding tank" means a sealed tank with no outlet to a dry well or other effluent disposal area and which stores septage or other wastes until the wastes can be pumped out and hauled to an

approved disposal site. A holding tank is not an individual sewage disposal system as defined in Env-Wq 1002.42.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.37 "Horizon" means a soil layer which is below the topsoil.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.38 "Hydric soil" means a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.39 "Hydrophytic vegetation" means vegetation typically adapted for life in inundated or saturated soil conditions.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.40 "Impermeable substratum" means any subsurface material which is relatively impervious, such as hard pan, clay, slate-like materials and other materials having a percolation rate of greater than 60 minutes per inch.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.41 "Increase the load on a sewage disposal system", as used in RSA 485-A:38, means:

- (a) In an existing residential building, adding bedrooms or converting existing rooms to additional bedrooms;
- (b) Converting from seasonal to full-time use or occupancy, as specified in Env-Wq 1004.16(b);
- (c) Converting from residential use only to residential plus commercial use or commercial use only; or
- (d) Changing or adding to an existing commercial use so as to increase the flow as calculated using Env-Wq 1008.03.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.42 "Individual sewage disposal system (ISDS)" means any wastewater disposal or treatment system, other than a system regulated under Env-Wq 700, which receives sewage or other wastes, or both, including septic tank leach field systems, privies or dry pit toilets, and incinerator-type toilets such as gas-operated, electric, fossil-fueled or any combination thereof.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

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Env-Wq 1002.43 "Inspection" means an on-site review by department staff of an individual sewage disposal system to ensure that the installed system is in compliance with the approved plans and specifications.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.44 "Install" means to establish or construct an individual sewage disposal system or any component thereof.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.45 "Large-diameter graveless pipe (LDGP) system" means an individual sewage disposal system where each leach line is a pipe at least 10 inches in diameter having perforations throughout its circumference, wrapped in non-woven fabric material which is separated from the pipe by an intermediate layer, and embedded in sand, such that the biomat interface is formed on the inside of the non-woven fabric.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.46 "Large disposal system" means an individual sewage disposal system which is designed for a flow of more than 2,500 gallons of sewage per day.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.47 "Leach line" means the component of an individual sewage disposal system, other than a dry well, which actually disperses effluent. A leach line can be a large-diameter graveless pipe, a chamber, a small-diameter perforated pipe, or some other technology approved pursuant to Env-Wq 1024.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.48 "Ledge lot" means a lot that has less than 4 feet of naturally deposited soil above ledge.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.49 "Manufactured housing" means "manufactured housing" as defined by RSA 205-A:1, I.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.50 "Manufactured housing park (MHP)" means "manufactured housing park" as defined in RSA 205-A:1, II, namely "any parcel of land under single or common ownership or control which contains, or is designed, laid out or adapted to accommodate 2 or more manufactured houses." Manufactured housing park does not include premises used solely for storage or display of manufactured housing.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

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Env-Wq 1002.51 "Marshes", for the purposes of Env-Wq 1000, means areas which are ponded or saturated for extended periods of time, do not support woody vegetation, are dominated by soft-stemmed herbaceous plants such as grasses, reeds, and sedges, and which exhibit very poorly drained soil conditions as determined by Env-Wq 1014.03(a).

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.52 "Matrix" means the natural soil material composed of both mineral and organic matter.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.53 "Mineral soil surface" means the top of the uppermost soil horizon consisting of mineral material with less than 12 to 18 percent of organic carbon, depending on the clay content.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.54 "Mottles" means a term used in Env-Ws 1000 to describe the redoximorphic features comprising spots of contrasting colors in a horizon, with both high chroma and low chroma represented in the variegated colors.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.55 "Natural woodland buffer" means "natural woodland buffer" as defined by RSA 483-B:4, XI.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.56 "Open space/conservation subdivision" means a purely residential subdivision of a tract of land, where:

- (1) A number of housing units are clustered on lots with dimensions and frontages reduced from minimum lot sizes required by Env-Wq 1005.03;
- (2) The dwelling unit density of the tract as a whole is equal to the density achieved by the lot sizing criteria of Env-Wq 1005.03 based on soil types and slopes; and
- (3) All land that is not housing lots is preserved as open space.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.57 "Operational approval" means written approval to cover and use or operate the constructed individual sewage disposal system, which is issued only after inspection by department staff under RSA 485-A:29, I.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

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Env-Wq 1002.58 "Organic soil material" means from 12 to 18 percent or more organic carbon by dry weight, depending upon the clay content.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.59 "Percolation rate" means the number of minutes needed for water to drop one inch into the soil within a percolation test hole, used to estimate suitability of the soil for receiving effluent.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.60 "Percolation test" means the method by which the percolation rate is established, as described in Env-Wq 1007.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.61 "Permitted designer" means an individual who holds a current authorization under RSA 483-A:35, I, to design individual sewage disposal systems.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.62 "Permitted installer" means an individual who holds a current authorization under RSA 483-A:36, I, to install individual sewage disposal systems.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.63 "Poorly drained soils" means hydric soils that have aquic conditions in the upper part and one or more of the following for any soil texture:

(a) Within 10 inches of the top of the mineral soil material and directly under an A or Ap horizon, a horizon with a depleted or gleyed matrix;

(b) Within 20 inches of the top of the mineral soil material and directly underlying a thick or very thick dark A or Ap horizon, a horizon with a depleted or gleyed matrix which is 4 inches or more in thickness;

(c) A matrix chroma of 2 or less that extends to a depth of 20 inches below the top of the mineral soil material, with a dark A or Ap horizon that is directly underlain by a horizon with a matrix value of less than 4, and, within 12 inches of the top of the mineral soil material or directly underlying the A or Ap horizon, whichever is shallower, 2% or more redoximorphic features that extend to the shallower of:

(1) A depth of 20 inches below the top of the mineral soil material; or

(2) A depleted or gleyed matrix;

(d) A spodic horizon and, within 6 inches of the top of the mineral soil material, an E horizon with 2% or more redoximorphic features or a stripped matrix that is directly underlain by a spodic horizon with either of the following:

(1) A Bh, Bhs, or Bs horizon with 2% or more redoximorphic features in the upper part; or

(2) A Bh or Bhs horizon, that is directly underlain by a horizon with 2% or more redoximorphic features;

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- (e) A spodic horizon and a Bh or Bhs horizon greater than 2 inches thick which is:
 - (1) Within 10 inches of the top of the mineral soil material;
 - (2) Directly underlying a dark A or Ap horizon or shallow E horizon; and
 - (3) Directly underlain by a horizon with 2% or more redoximorphic features that is within 20 inches of the top of the mineral soil material;
- (f) A spodic horizon and, within 10 inches of the top of the mineral soil material and directly underlying a dark A or Ap horizon, one of the following:
 - (1) An E horizon with 2% or more redoximorphic features or a stripped matrix directly underlain by a Bh, Bhs, or Bs horizon with 2% or more redoximorphic features;
 - (2) A Bh or Bhs horizon directly underlain, but within 20 inches of the top of the mineral soil material, by 2% or more redoximorphic features; or
 - (3) A Bs horizon with 2 % or more redoximorphic features;
- (g) If sandy and no spodic horizon, either of the following:
 - (1) Within 10 inches of the top of the mineral soil material and directly underlying a dark A or Ap horizon, a horizon with matrix color chroma 3 or less, value 4 or more with 2 % or more redoximorphic features; or
 - (2) Within 15 inches of the top of the mineral soil material and directly underlying a greater than 10 inches, less than 15 inches, very dark A or Ap horizon, a horizon with matrix color chroma 3 or less, value 4 or more with 2% redoximorphic features;
- (h) No spodic horizon, and within 10 inches of the top of the mineral soil material and directly underlying a dark A or Ap horizon, a horizon with 5 % or more redox depletions and within 20 inches of the top of the mineral soil material a horizon with a depleted or gleyed matrix;
- (i) No spodic horizon, and within 15 inches of the mineral soil material and directly underlying a greater than 10 inch, less than 15 inch, very dark Ap horizon, a horizon with 5% or more redox depletions and within 20 inches of the top of the mineral soil material a horizon with a depleted or gleyed matrix;
- (j) A very dark A or Ap horizon less than 10 inches thick and directly underlain by a horizon with matrix color due to wetness of chroma 3 or less with 10% or more redoximorphic features, and:
 - (1) Within 6 inches of the top of the mineral soil surface, 2 % or more redoximorphic features, and
 - (2) Within 18 inches of the top of the mineral soil material, 2% or more redoximorphic depletions.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.64 "Primary building line" means "primary building line" as described in RSA 483-B:9, II(b).

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

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Env-Wq 1002.65 "Prominent redoximorphic features" means the contrast in color between a redoximorphic feature and the matrix.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.66 "Protected shoreland" means "protected shoreland" as defined by RSA 483-B:4, XV.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.67 "Public sewer" means any publicly-owned pipe or conduit designed to receive and convey sewage or other wastes to a municipally-owned and operated treatment works.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.68 "Receiving layer" means the natural soil under and around an effluent disposal area, beyond the biomat interface, which receives, filters, and provides final disposal of the effluent.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.69 "Recreational campground" means "recreational campground or camping park" as defined in RSA 216-I:1, VII, namely "a parcel of land on which 2 or more campsites are occupied or are intended for temporary occupancy for recreational dwelling purposes only, and not for permanent year-round residency, excluding recreation camps as defined in RSA 485-A:23."

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.70 "Redox depletions" means bodies of chroma 2 or less, having value 4 or more where iron-manganese oxides and clay have been stripped.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.71 "Redoximorphic features" means features associated with soil wetness that are formed by the processes of reduction, translocation, and/or oxidation of iron and manganese oxides.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.72 "Reference line" means "reference line" as defined by RSA 483-B:4, XVII.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.73 "Repair or replace" means to restore an individual sewage disposal system by reconstructing it to a sound condition or substituting a properly working component for a component that is no longer in proper working condition.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

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Env-Wq 1002.74 "Residential" means of or relating to single-family detached housing or detached housing with 2 halves so as to accommodate 2 families, also called duplex housing, other than:

- (a) Manufactured housing located in a manufactured housing park; and
- (b) Any form of condominiums, even if single-family detached units or duplex units.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.75 "Restrictive layer" means a soil horizon that restricts the downward flow of water and is uncharacteristic of the soil layers above and below, such as a layer of soil with a consistence of firm or very firm, cemented horizons, or stratified layers of silt, loam or clay within the soil profile.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.76 "Seasonal high water table" means the depth from the mineral soil surface to the upper most soil horizon that contains 2% or more distinct or prominent redoximorphic features that increase in percentage with increasing depth.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.77 "Septic tank" means a watertight unit designed to receive sewage and other wastes for the purpose of removing substantially all settleable solids.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.78 "Shoreland frontage" means the average of the distances of the actual natural shoreline footage and a straight line drawn between property lines.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.79 "Site evaluation" means evaluating soil and site conditions for the purpose of locating areas suitable for individual sewage disposal systems as well as building and well locations for septic system design and subdivision applications pursuant to RSA 485-A, including but not limited to:

- (a) The determination of wetland boundaries;
- (b) The determination of surface waters;
- (c) Test pit evaluation; and
- (d) Soils analysis for the purpose of wastewater treatment system design.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.80 "Slope" means the difference in elevation in feet for 100 feet of horizontal distance.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

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Env-Wq 1002.81 "Small disposal system" means an individual sewage disposal system which is designed for a flow of up to and including 2,500 gallons of sewage per day.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.82 "Soil horizon" means a distinct layer of soil running parallel to the soil surface, designated as the O, A, B or C horizon proceeding vertically through the soil profile from the soil surface downward.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.83 "Special flood hazard area" means "special flood hazard area" as defined in 44 CFR 59.1.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.84 "Spodic horizon" means a subsurface layer of soil characterized by the accumulation of aluminum oxides, with or without iron oxides and organic matter.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.85 "Standard dimension ratio (SDR)" means the ratio of pipe diameter to pipe wall thickness.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.86 "Steady state" means a condition that changes only negligibly over time.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.87 "Subdivision approval" means written approval of subdivision plans and specifications.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.88 "Surface waters of the state" means "surface waters of the state" as defined by RSA 485-A:2, XIV, namely, "perennial and seasonal streams, lakes, ponds and tidal waters within the jurisdiction of the state, including all streams, lakes, or ponds bordering on the state, marshes, water courses, and other bodies of water, natural or artificial."

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.89 "Test pit" means a hole dug to determine soil characteristics and profile description, in accordance with Env-Wq 1006.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

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Env-Wq 1002.90 "Trench system" means an individual sewage disposal system in which the leach lines are separated by a vertical barrier of soil.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.91 "Value" means the relative lightness or intensity of color and is approximately a function of the square root of the total amount of light. Value is one of the 3 variables of color.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.92 "Very poorly drained soils" means hydric soils that are flooded daily by tides or soils that have aquic conditions in the upper part and have one or more of the following:

- (a) Sulfidic materials within 12 inches of the soil surface;
- (b) An organic surface layer greater than 16 inches thick;
- (c) An organic surface layer of 8 to 16 inches thick, and directly underlying the O horizon or, if present, the A horizon, with redoximorphic features;
- (d) An organic surface layer of 4 to 8 inches thick, or mucky A or Ap horizon and is directly underlain by a depleted or gleyed matrix; or
- (e) For sandy soil textures, no spodic horizon, but with an organic surface layer of 4 to 8 inches thick, or mucky A or Ap horizon, directly underlain with 2% or more redoximorphic features.

Env-Wq 1002.93 "Watercourse" as used in RSA 485-A:2, XIV, means a channel providing for the conveyance of water, whether natural or artificial, which is scoured, indicating periods of concentrated flow, and does not include drainage swales and areas of poorly drained soils as defined in Env-Wq 1002.63 in which no scour channel exists.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1002.94 "Wetland" means "wetland" as defined in RSA 482-A:2, X, namely "an area that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal conditions does support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Wetlands include swamps, marshes, bogs, and similar areas.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1003 PLANS AND SPECIFICATIONS

Env-Wq 1003.01 Preparation.

- (a) Plans for small disposal systems shall be prepared by a permitted designer except in the instance of a single family residence, in which case the owner may prepare the design for his or her own domicile.
- (b) In all cases, except when a small residential system is designed by the owner, the submitted plans shall have a seal affixed by a permitted designer.
- (c) The seal required by (b), above, shall be as follows:

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- (1) The seal shall be circular in design with corner borders;
- (2) The seal shall be 1.9 inches in height;
- (3) The circular portion shall include the wording "New Hampshire" at the top and "Department of Environmental Services" at the bottom; and
- (4) Within the circular area, the words "Designer of Subsurface Disposal Systems" and the name and permit number of the permitted designer shall be contained.

(d) Plans for disposal systems greater than 2,500 GPD shall be designed by, and bear the stamps of, a permitted designer who is also a civil or sanitary engineer licensed in the state of New Hampshire.

(e) Plans for systems greater than 600 GPD on ledge lots shall be designed by, and bear the stamps of, a permitted designer who is also a civil or sanitary engineer registered in the state of New Hampshire.

(f) Plans which involve the practice of land surveying as defined by RSA 310-A:54, IV shall bear the stamp of a licensed land surveyor as required by RSA 310-A:53, II and RSA 310-A:67, II.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.02 Application Processing; Expiration of Approvals; Retention of Plans.

(a) Plans and specifications for approval of a proposed subdivision or individual sewage disposal system (ISDS) shall be submitted in duplicate to the department's division of water, subsurface systems bureau. If the applicant needs or wishes to have one or more copies of the plan showing that it has been approved, the applicant shall submit as many additional copies as are desired.

(b) The department shall act on plans and specifications that have been submitted for a proposed subdivision or ISDS as specified in RSA 485-A:31.

(c) If the plans and specifications for a proposed subdivision or ISDS cannot be approved as submitted but could be approved if supplemental or revised information were provided, the department shall notify the applicant of the deficiency(ies) and inform the applicant that if the supplemental or revised information is not submitted within 180 days, the application will be denied and discarded.

(d) If the plans and specifications for a proposed subdivision or ISDS could not be approved even if supplemental or revised information were provided, or if the applicant fails to respond to any notification that the plans or specifications are deficient within 180 days of the date of the notification, the department shall:

- (1) Deny the application; and
- (2) Discard the plans and specifications after any time for appealing the denial has expired.

(e) If approval for construction of an ISDS has been issued but approval for operation has not been issued, the approval for construction shall expire and the department shall discard the application 4 years from:

- (1) The date of the approval for construction, if no request for an inspection has been received by the department; or
- (2) The date of a do not backfill order, if operation approval has not been issued due to the failure of the installer to correct deficiencies identified in the do not backfill order or the failure of

the installer to notify the department that the deficiencies have been corrected and request a re-inspection.

(f) Prior to discarding an application pursuant to (e), above, the department shall send written notice of its intent to discard via first class mail to the applicant, with a copy to the appropriate local governing body, no less than 30 calendar days prior to discarding the application. The notice shall also state that if the department receives information that the system has been installed or is in the process of being installed, the department shall schedule an inspection of the system and not discard the application.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.03 Format of Plans.

(a) The final plans for any subdivision of land and for any individual sewage disposal system (ISDS) submitted for approval on paper shall meet the format requirements specified in (b) through (f), below.

(b) Left margins shall be 2 inches for binding, and the remaining margins shall be at least one inch.

(c) Subdivision plans shall have a scale of not more than 50 feet to one inch, unless the plan will not fit on a 28 inch by 40 inch sheet of paper, in which case a scale of one inch to 100 feet or one inch to 200 feet shall be used.

(d) For ISDS plans, the lot and system shall be shown on a scale of not more than 20 feet to one inch, except that if the lot cannot be shown on a 1:20 scale, it shall be shown on a larger scale on a separate sheet.

(e) Sheet sizes shall be 22 inches x 34 inches or 28 inches x 40 inches, with separate sheets numbered and showing relationship to each other.

(f) All plans shall be folded to 8-1/2 inches by 11 inches.

(g) For plans submitted electronically, the format shall be as specified in the user agreement entered into by the permitted designer.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.04 Information Required for Subdivision Approval. Each applicant for subdivision approval under RSA 485-A:29, I shall submit the following:

(a) The name, mailing address, and complete daytime telephone number of the applicant and, if available, a fax number and e-mail address;

(b) The name, mailing address and complete daytime telephone number of the owner of the property that is proposed to be subdivided (property), if the owner is other than the applicant;

(c) Identification of the property by tax map and lot number and by street address and municipality;

(d) A statement regarding the intended use of the property;

(e) A plan of the property showing:

(1) All property for which approval is requested;

(2) All property that is contiguous to the property for which approval is requested;

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- (3) All easements granted across any lot for which approval is requested;
 - (4) All ledge outcrops within 75 feet of any proposed EDA;
 - (5) The location of test pits and percolation tests, numbered to facilitate keying to the data required by (m) - (o), below;
 - (6) The name of each abutter, shown on the lot owned by that abutter;
 - (7) Subdivision boundaries transferred to United States Department of Agriculture, Natural Resources Conservation Service (USDA/NRCS) soil maps required by RSA 485-A:34, I, corroborated by actual test pit data and hydric soil data including hydric soil criterion and location of hydric soils, in accordance with Env-Wq 1014.03;
 - (8) The location of existing and proposed culverts and dredge and fill areas;
 - (9) The area of each lot and the specific number for each lot;
 - (10) Right-of-way access to each lot;
 - (11) All areas unsuitable for conventional subsurface disposal;
 - (12) A delineation of the area(s) dedicated to sewage disposal for each lot;
 - (13) The location of any part of the property that lies within a special flood hazard area; and
 - (14) The location of any part of the property subject to deeded rights of flowage;
- (f) The location of the property on a United States Geological Survey (USGS) quadrangle map or other suitable location plan in sufficient detail so that an inspector is able to locate the site;
- (g) The location of all surface waters and wetlands, identified in accordance with Env-Wq 1014.03(a), on the property, and also those within 75 feet of the property;
- (h) The proposed type of water supply to be used in the subdivision;
- (i) A note on the plan certifying that the wetlands have been delineated in accordance with Env-Wq 1014.03, and specifying who performed the delineation and the month and year in which it was done;
- (j) The topography of the property, with elevations referenced to mean sea level (M.S.L.) or to the mean high water level of the nearest surface water or to other local bench mark, shown as follows:
- (1) Ground surface elevations throughout the subdivision in sufficient number to indicate the topography; or
 - (2) If the property is not level, contour lines drawn with maximum intervals of 5 feet;
- (k) The location of water pipes and existing buildings on the property and within any of the set-backs established in Env-Wq 1000 on abutting properties, or, if access to an abutting property is denied, a statement to that effect;
- (l) The location of existing ISDS;
- (m) Percolation test results at each proposed EDA and the date and depth measured for each lot;
- (n) For each test pit, the following information:

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- (1) The depth from ground surface to seasonal high water table;
 - (2) The depth from ground surface to impermeable substratum; and
 - (3) A description of each soil horizon in accordance with Env-Wq 1006;
- (o) Data for all test pits dug, shown on the plans if there is sufficient room or on attached 8-1/2 inch by 11 inch sheets, bearing the permitted designer's stamp on each sheet;
- (p) If applicable to the proposed subdivision, copies of the following approval(s):
- (1) Alteration of terrain approval under RSA 485-A:17;
 - (2) Groundwater discharge permit under Env-Ws 1500 or Env-Wq 402;
 - (3) Dredge and fill permit under RSA 482-A; and
 - (4) Water supply approval(s) under RSA 485:8;
- (q) A signed statement certifying that the plan conforms to all applicable local zoning ordinances and regulations; and
- (r) If any portion of the property is within the protected shoreland, the following additional information:
- (1) Length of shoreland frontage, if the development is residential;
 - (2) Lot width, if the development is commercial; and
 - (3) The topography of an area equal to or greater than the lot size determined by Env-Wq 1005.03 or Env-Wq 1005.04, as applicable, for each lot.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.05 Information Required for Subdivision Approval when Community or Public Water Supply System Will Be Provided.

- (a) If a community water system will be provided, plans and specifications of the water supply system shall be submitted to and approved by the department.
- (b) If a public water supply system will be provided, the applicant shall submit the following:
- (1) A statement from the supplier of water that it can and will supply water to the subdivision, which shall be submitted with the application; and
 - (2) Plans of water main extensions, which shall be submitted to and approved by the department in accordance with Env-Ws 300 or successor rules in subtitle Env-Dw.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.06 Information Required for Individual Sewage Disposal Systems. Each applicant for individual sewage disposal system (ISDS) approval under RSA 485-A:29, I shall submit the following:

- (a) The name, mailing address, and complete daytime telephone number of the applicant and, if available, a fax number and e-mail address;

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- (b) The name, mailing address and complete daytime telephone number of the owner of the property on which construction, alteration, or extension of the ISDS is proposed, if the owner is other than the applicant;
- (c) Identification of the property by tax map and lot number and by street address and municipality;
- (d) As applicable, one of the following:
 - (1) Subdivision approval number;
 - (2) A written statement that the lot meets Env-Wq 1004.05(a); or
 - (3) If the lot is exempt from state subdivision approval because all lots in the subdivision that created the lot are larger than 5 acres and no portion of any lot is within the protected shoreland, a clear statement to that effect on the application;
- (e) All lot dimensions and the location of all existing and proposed buildings and wells, and the distance from each to all components of the ISDS;
- (f) A description of the adjoining lot if the proposed ISDS or well is closer than 75 feet to a boundary;
- (g) The location of the property in sufficient detail so that an inspector is able to locate the site, including the property's location shown on a USGS quadrangle map or other similar location plan and narrative directions for getting to the property by car which include telephone pole numbers and mileage from intersections or other readily-identifiable landmarks;
- (h) The distance and location of the nearest wetlands identified in accordance with Env-Wq 1014.03(a) and surface water in relation to the proposed ISDS or, if the nearest wetland or surface water is greater than 75 feet away, a statement to that effect;
- (i) A line on the plan showing where the wetland investigation was performed for the purpose of locating the EDA on the property;
- (j) The source of drinking water and the location of all proposed and existing drinking water supply pipes;
- (k) Soil data including percolation test data, test pit log, hydric soil data including hydric soil criterion and location of hydric soils and corroborated USDA/NRCS soil survey data, in accordance with Env-Wq 1014.03;
- (l) For residential use, the number of bedrooms in the existing or proposed structure and the estimated total interior square footage of the structure;
- (m) For commercial use, the estimated sewage load in gallons per day;
- (n) Ground surface elevations for the lot on the 1:20 scale plan showing the slope of the land at 2 foot contour intervals, to at least 75 feet from the existing or proposed structure and ISDS, including, as appropriate:
 - (1) Spot elevations to verify level lots; and
 - (2) For non-level lots, original and proposed contours, referenced to a bench-mark located near the proposed ISDS;
- (o) Details of the proposed septic tank, including:

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- (1) Volume, in gallons;
 - (2) Material of construction, such as metal, concrete, fiber glass, plastic, or other;
 - (3) Placement of baffles;
 - (4) Approximate tank location and depth to finished grade; and
 - (5) Provisions for cleaning;
- (p) A scale plan of the proposed ISDS with construction details and dimensions on the 1:20 scale drawings;
- (q) Proof of executed easements, if any part of the proposed ISDS is located on property other than the owner's;
- (r) At least one benchmark and at least one tie point to landmarks or established reference points within 100 feet;
- (s) Sill elevations, invert elevations at building exit, invert elevations at the inlet and outlet from the septic tank, invert elevations at the inlet and outlet from the distribution box, invert elevations of leach lines, and the bottom elevation of the EDA, referenced to a benchmark;
- (t) If a pump is proposed, the following information:
- (1) The make, type, capacity, and model of the sewage pump;
 - (2) Details of the pump well, including pump well manufacturer, type, and size;
 - (3) The make, type, and model of the pump controls, including elevations of control switches;
 - (4) Details of the discharge line, including pressure line data and siphons, and siphon chambers, when used;
- (u) Details of the distribution box, if applicable, including the number of outlets and the name of the manufacturer;
- (v) A cross-section of the proposed ISDS showing the lay out of the system;
- (w) Details of the proposed EDA, including:
- (1) The type and size of stone or sand, as applicable;
 - (2) The type and size of leach line, if used, or the dimensions and construction details of the dry well;
- (x) A statement that the leach lines and the bottom of the bed is level, as required by Env-Wq 1017.05(g);
- (y) A statement that the leach lines shall be installed in accordance with Env-Wq 1017.01;
- (z) A designation on the plan of all areas of exposed ledge or boulders greater than 6 feet in diameter within 75 feet of the proposed EDA;
- (aa) A note on the plan certifying that the wetlands have been delineated in accordance with Env-Wq 1014.03 and specifying who performed the delineation and the date on which it was done;

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- (ab) A statement signed by the applicant certifying that the plan conforms to:
 - (1) The requirements of 44 CFR 60.3(a)(6)(ii), if within a special flood hazard area; and
 - (2) All applicable local septic system ordinances and regulations;
- (ac) The book and page number, from the county registry of deeds, for the lot upon which the system will be constructed, or probate docket number if applicable;
- (ad) The location of any part of the lot that lies within a special flood hazard area;
- (ae) The location of any part of the lot that is subject to deeded rights of flowage;
- (af) If the lot is within the protected shoreland, the following additional information:
 - (1) The reference line;
 - (2) The primary building line;
 - (3) The distance and location of nearest surface waters in relation to the ISDS unless the nearest surface waters is greater than 125 feet away;
 - (4) A designation on the plan of the limits of the natural woodland buffer;
- (ag) The design intent, stated clearly on the plan as follows:
 - (1) "The bottom of the effluent disposal area shall be constructed at ____ elevation"; and
 - (2) "There is/are approximately ____ foot/feet above, at, or below original ground on the high contour of the designed effluent disposal area"; and
- (ah) A list of all waivers requested from Env-Wq 1000 or Env-Wq 1400.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.07 Applicant's Signature Required; Certification of Accuracy.

- (a) The applicant shall agree to and sign the following statement on the "Application for Individual Sewage Disposal System" prior to submitting the application:

"The undersigned certifies that s/he is a permitted designer in good standing or the owner of said property, and that the information submitted accurately represents the existing site conditions as of the date of application. The undersigned further agrees and understands that if any information submitted in this application which is material to the department's approval of the application is false or misleading, the approval as well as the designer's permit, if applicable, shall be subject to suspension or revocation."

- (b) If any information submitted in an application for an ISDS which would be material to the department's approval of the application is false or misleading, the approval shall be subject to suspension or revocation in accordance with Env-Wq 1004.20.

(c) If a permitted designer submits information with an application which would be material to the department's approval of the application and which is knowingly false or misleading, the designer's permit shall be subject to suspension or revocation in accordance with Env-Wq 1004.20.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.08 Owner's Signature Required. The owner shall agree to and sign the following statement on the "Application for Individual Sewage Disposal System" prior to the application being submitted:

"I/we certify that I am/we are the present owner(s) of the property referenced in this application and that I/we have seen the plans, and I/we hereby confirm that the plans are in accordance with my/our needs and desires. I/we fully understand that should this plan be approved, no waivers to the construction approval will be allowed and that any change(s) will require a new submission, review, and approval."

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.09 Ledge Lot Specifications. In addition to the requirements for an ISDS application established in Env-Wq 1003.06, the applicant designing an ISDS for a ledge lot shall:

- (a) Specify the type of fill to be used to raise the bed to the appropriate height;
- (b) Specify the method of stabilization of the fill, including compaction method, layering, wetting, and stabilization period;
- (c) Supply test pit information to verify the nature of the receiving layer, both at the EDA and down-slope from the proposed EDA, as per Env-Wq 1006.04(c);
- (d) Show all bedrock exposures within 100 feet of the proposed EDA; and
- (e) Show all surface waters and drinking water supplies within 200 feet of the components of the proposed ISDS.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.10 Repair or Replacement of Existing Residential ISDS.

(a) An EDA serving a structure that is only residential as defined in Env-Wq 1002.74 and does not receive anything other than domestic sewage for disposal may be repaired or replaced without submitting a new plan for approval only if all of the following conditions are met:

- (1) The EDA is not within 75 feet of any surface water or water supply well;
- (2) The bottom of the bed is more than 24 inches above seasonal high water table;
- (3) There will be no change to the dimensions, location, depth, or type of design that existed before repair or replacement;
- (4) The use will not change; and
- (5) The flow will not increase.

- (b) Prior to any repair or replacement pursuant to (a), above, a permitted designer shall:
- (1) Evaluate the seasonal high water table in the location of the EDA by digging a test pit in accordance with Env-Wq 1006, except that the test pit may extend only 2 feet below the bottom of the EDA;
 - (2) Determine whether the location of the EDA is within 75 feet of surface waters or water supply wells; and
 - (3) Submit a "Repair/Replacement Report" using the department's "Repair/Replacement Report" form or by otherwise submitting the information required by (c), below, to the department and to the selectmen or other local governing body of the municipality in which the property is located.
- (c) The "Repair/Replacement Report" shall provide the following information:
- (1) The date of the report;
 - (2) The name, permit number, mailing address, and daytime telephone number of the permitted designer who completed the evaluation required by (b), above;
 - (3) The name, permit number, mailing address, and daytime telephone number of the permitted installer who will be performing the repair or replacement;
 - (4) The name, mailing address, and daytime telephone number of the owner of the property;
 - (5) The location of the property on which the ISDS is located, by street address, town, and tax map and lot number;
 - (6) The construction approval number for the existing ISDS, if available; and
 - (7) Information on the test pit(s) dug, including the test pit number, the date the test pit was dug, and the results of the test pit;
- (d) The Repair/Replacement Report form or the equivalent information submitted shall be signed by the permitted designer identified pursuant to (b)(2), above, and by the permitted installer identified pursuant to (b)(3), above. Such signatures shall constitute certification that the signers believe the information to be true, complete, and not misleading.
- (e) If the conditions specified in (a), above, are met, the work to repair or replace the ISDS shall not commence until after the department acknowledges receipt of the "Repair/Replacement Report" as required by (c) and (d), above.
- (f) If the conditions specified in (a), above, are not met, then:
- (1) The permitted designer shall submit an application for a new ISDS in accordance with Env-Wq 1003; and
 - (2) Work on the new ISDS shall not commence until after the plans are approved.
- (g) ISDS repair or replacement performed pursuant to (e) or (f), above, shall be by a permitted installer, except an individual may do the work for the individual's own domicile.
- (h) Before repairing or replacing an ISDS, the owner shall:

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- (1) Comply with all requirements of (b) through (f), above, if the EDA to be repaired or replaced is for the individual owner's own domicile and the owner is not working through a permitted designer;
 - (2) Comply with all requirements of (i) through (m), below, if the EDA to be repaired or replaced is for the individual owner's own domicile and the owner is not working through a permitted installer;
 - (3) Obtain all required local authorization and permits; and
 - (4) Sign a statement to certify that the owner understands that a new, state-approved ISDS can only be obtained by submitting a new application in accordance with Env-Wq 1003.06, and that repairing or replacing some or all of the existing ISDS pursuant to this section will not result in a new, state-approved ISDS.
- (i) Within 10 days of completion of the work, the installer shall submit a sketch of the repaired/replaced system as specified in (j), below, and a completed questionnaire form as specified in (l), below, to the department.
- (j) The sketch required by (i), above, shall show:
- (1) The size, type, and kind of replacement system;
 - (2) The location of replaced system, with dimensions, distances, and ties to 2 or more fixed reference points; and
 - (3) The location of the house and all surface waters, wetlands, wells, and ledge outcrops within 75 feet of the replaced EDA.
- (k) The sketch required by (i), above, shall be signed by the permitted designer to certify that:
- (1) The sketch represents the EDA as constructed; and
 - (2) The requirements of (a), above, were met.
- (l) The questionnaire form required by (i), above, shall contain the following:
- (1) The information specified in (c)(1)-(6), above;
 - (2) The opinions of the permitted designer and the permitted installer as to why the existing system needs to be repaired or replaced;
 - (3) The type of water supply;
 - (4) The number of bedrooms in the residence served by the system;
 - (5) The type of appliances and fixtures by which wastewater is generated, such as dishwasher, washing machine, jacuzzi, hot tub, toilets, showers, water treatment, and garbage grinders;
 - (6) Information concerning the existing system's approximate age, type, and kind; and
 - (7) The size and type of septic tank, and if the septic tank is also being repaired or replaced, the size and type of the new septic tank.

(m) The questionnaire form required by (i), above, shall be signed by the installer to certify that the installer believes the information provided is true, complete, and not misleading.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.11 Repair or Replacement of Other Existing ISDS.

(a) If an ISDS for a structure that is not strictly residential as defined in Env-Wq 1002.74 needs to be repaired or replaced, the owner of the ISDS shall work through a permitted designer to submit an application for a new ISDS for approval in accordance with Env-Wq 1003.

(b) If an ISDS that receives anything other than sewage for disposal needs to be repaired or replaced, the owner of the ISDS shall work through a permitted designer to submit an application for a new ISDS for approval in accordance with Env-Wq 1003.

(c) All repair or replacement work performed pursuant to (a) or (b), above, shall be by a state-permitted installer.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.12 When Installation of New System Required. Whenever an approval for a new design has been obtained pursuant to these rules, whether as part of an expansion or conversion of an existing use or for any other reason, the new design shall be installed if the existing ISDS fails or is otherwise to be repaired or replaced.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.13 Requirements for Replacing or Remodeling Commercial Buildings. The owner of a commercial building shall, prior to starting construction to replace or remodel the building, submit plans and specifications in accordance with Env-Wq 1003 for an ISDS to serve the building unless:

(a) Valid construction and operation approvals have been issued for the existing ISDS for the building; and

(b) No changes to the building that would cause an increase in loading, as determined pursuant to Env-Wq 1008.03, have been or will be made.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.14 Alteration of ISDS After Approval; When New Approval Required.

(a) The plan for an ISDS approved by the department shall be the final plan.

(b) A new application shall be submitted for approval for an ISDS if:

(1) The bed is not installed in the same footprint and at the same elevation shown on the approved plan; or

(2) A pump has been added.

(c) A new application shall not be required for an ISDS if amended plans, approved and stamped by the permitted designer who prepared the original approved plan, are available prior to final inspection and:

- (1) The location of the bed has not changed but any other component of the ISDS has been moved;
 - (2) Changes have been made to the ISDS during installation that include the elimination of a pump; or
 - (3) If the designer of the approved plan specified a particular brand for any ISDS component, a different brand of that component has been substituted by the installer.
- (d) If a new application or amended plans are submitted, the plans shall include ties to the tank cover if the tank is not in the location shown on the original plans.
- (e) If bathroom fixtures are added to the basement level of a residence after the approved ISDS has been installed and approved for operation, amended plans shall be submitted that:
- (1) Show compliance with Env-Wq 1010.01(g); and
 - (2) Are approved and stamped by a the permitted designer who prepared the original approved plan.
- (f) If amended plans cannot be submitted as required by (e), above, a new plan shall be submitted for approval.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.15 Alteration of Subdivisions After Approval.

- (a) The plan for a subdivision approved by the department shall be the final plan.
- (b) For a subdivision, a new application shall be submitted if any lot line changes, unless exempted by RSA 485-A:33.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.16 Notification to Abutters. Prior to submitting an application for approval of an ISDS which contains a request for an encroachment waiver, the applicant shall comply with the notice requirements of RSA 485-A:30-a.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.17 Plan Requirements Where Encroachment Waiver(s) Requested. If an applicant requests an encroachment waiver for a design requirement, it shall be clearly identified on the plans at the location where the waiver would apply.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.18 Encroachment Waiver Applications. Upon receipt of an application containing one or more requests for encroachment waivers that does not contain the information required by RSA 485-A:30-a, the department shall log in the application and notify the applicant that the application shall not be reviewed

until the required information is submitted. The statutory time period specified in RSA 485-A:31 shall not begin to run until all of the required information is received by the department.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.19 Encroachment Waiver Criteria.

(a) The department shall not grant a request for an encroachment waiver if the owner of the property on which the waiver would encroach objects to the waiver, unless denial of the waiver would result in the following:

- (1) Where no structure had previously been constructed on the property, the owner of the property for which the waiver is sought would be entirely precluded from developing the property as a result of the denial;
- (2) Where a structure on the property has had a pre-existing use, the owner of the property for which the waiver is sought would be precluded from continuing the pre-existing use except by installing a holding tank; or
- (3) Regardless of any pre-existing use of the property, denial of the waiver would result in unnecessary hardship to the owner due to special characteristics of the property.

(b) In determining whether an unnecessary hardship would result pursuant to (a)(3) above, the department shall apply those considerations applicable to decisions of a zoning board of adjustment under RSA 674:33.

(c) The department shall not automatically grant a request for an encroachment waiver if the owner of the property affected by the encroachment agrees to the encroachment, but shall proceed to review the waiver request in accordance with the criteria of Env-Wq 1001.02.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.20 Encroachment Waiver Approvals. Upon finding that an application containing a request for one or more encroachment waivers meets the requirements of these rules for approval, the department shall notify the applicant that the department shall issue the construction approval upon receipt by the department of a copy of the recorded notice as required by RSA 485-A:30-a.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.21 Designation of Well Location.

(a) Pursuant to RSA 485-A:30-b, all plans and specifications for ISDS shall show one of the following:

- (1) The actual or proposed location of the well and the protective radius associated with the well;
or
- (2) A designated area for the well, within which the well can be installed anywhere without the protective well radius extending beyond the property line and without violating any other set-back requirements.

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(b) In the event the well cannot be installed in the location or area designated pursuant to (a), above, then the procedures and requirements of Env-Wq 1008.10(c) and RSA 485-A:30-b, I(g) shall be followed, and the standard release form as per Env-Wq 1008.12 shall be executed.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1003.22 Replacement of Systems in Failure; Pumping Required.

(a) The owner of an ISDS in failure as defined in RSA 485-A:2, IV shall cease using the EDA so as to prevent any wastewater from flowing onto or into the ground or to the EDA, either by vacating the premises served by the ISDS or by having a licensed septage hauler pump out the septic tank at sufficient frequencies to prevent wastewater from otherwise exiting the septic tank. If the owner elects to pump the tank in lieu of vacating the premises, the owner shall so notify the department and the local health officer and retain all pumping receipts for inspection by department staff or the health officer.

(b) All applications submitted for the purpose of correcting an ISDS in failure shall be accompanied by a written statement from the town health officer or a permitted designer confirming that the existing ISDS is in fact in failure.

(c) Construction approvals granted for replacement of an ISDS in failure shall be valid for a period of 90 days, except that the department shall grant one 90-day extension if circumstances beyond the control of the owner have prevented the ISDS from being completely installed. Failure to complete construction within the approval period shall result in the invalidation of the approval.

(d) The department shall consider and grant waivers when necessary to approve plans to replace an ISDS in failure. Waivers shall be requested in accordance with Env-Wq 1001.02.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1004 APPROVALS

Env-Wq 1004.01 Water Line Connection. Where a municipal or other public water supply is proposed to be used, written verification from the owner of the water system that connection will be allowed shall be submitted by the applicant before a construction approval for an ISDS is issued.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1004.02 Posting of Construction Approval. The construction approval shall be posted in a conspicuous place during the time of construction.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1004.03 Subdivision Contracts Allowed Before Approval.

(a) A subdivider shall not be required to obtain approval of the subdivision plans prior to executing contracts for sale or other conveyance of lots in the subdivision where such contracts are expressly made conditional on the subdivider obtaining approval prior to closing or other passage of title or other interest upon payment of the agreed-to price.

(b) Purchase and sale or other contracts containing the following language, or language of equal import, shall be acceptable under this rule:

"This contract is expressly conditioned upon (subdivider) obtaining approval of the subdivision from the New Hampshire Department of Environmental Services prior to the (closing/final transfer/lease) date, and (closing/final transfer/lease) shall not occur unless and until (subdivider) has provided (purchaser/lessee/unit owner) with written approval by the Department of the subdivision or the part thereto containing (purchaser's) (lot/unit) containing the (lot/unit) as described herein."

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1004.04 Subdivision Approval Required Prior to Septic System Approval. Any lot of less than 5 acres in size that does not have subdivision approval or meet one of the exceptions listed in Env-Wq 1004.05(a) shall not be considered for ISDS approval without meeting the requirements of Env-Wq 1000 for subdivision approval.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1004.05 Lots or Condominiums Not Having Subdivision Approval.

(a) The department shall not require that a lot of less than 5 acres have subdivision approval prior to being eligible for ISDS approval in the following circumstances:

- (1) The lot is within 1,000 feet of surface water and was created prior to July 1, 1967;
- (2) The lot is not within 1,000 feet of surface water and was created prior to July 1, 1971;
- (3) The lot is within 1,000 feet of surface water and was created between July 1, 1967 and July 1, 1975 or is not within 1,000 feet of surface water and was created between July 1, 1971 and July 1, 1975, and:
 - a. The lot is within a subdivision that received local approval, if such approval was required by local ordinances or regulations in place at the time the lot was created;
 - b. At least 50% of the other lots in the subdivision have been built on pursuant to valid construction approvals issued by the department or its predecessor agency, or 25% to 50% of the lots, including at least one abutting lot, have been built on pursuant to valid construction approvals; and
 - c. Subdivision approval cannot be obtained from the department because the lot does not meet current subdivision criteria.

(b) The department shall not require that a condominium have subdivision approval prior to being eligible for ISDS approval if the condominium was created before June 18, 1971.

(c) The department shall not require that a condominium have subdivision approval prior to being eligible for ISDS approval if the condominium was created between June 18, 1971 and September 1, 1989, and:

- (1) The condominium received local approval prior to September 1, 1989, if such approval was required by local ordinances or regulations in place at the time the condominium was created;
- (2) The declarant, as defined in RSA 479-A or in RSA 356-B as in effect at the time the condominium was created, is no longer a majority owner of the condominium;

(3) The condominium was registered under RSA 479-A or was approved by the New Hampshire attorney general under RSA 356-B, if required by the statute in effect at the time the condominium was created; and

(4) Through inadvertence or mistake, the condominium developer did not request subdivision approval from the department or its predecessor, the water supply and pollution control commission, at the time the approvals specified in (1) and (3), above, were obtained.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1004.06 Inspection Before Operational Approval.

(a) In accordance with RSA 485-A:29, I, the department shall inspect the ISDS before it is covered and placed in operation.

(b) Inspection by the department shall not be construed as a substitute for good construction oversight practices, which shall be conducted throughout the construction process by the permitted installer or homeowner, where the homeowner is installing the ISDS at his or her own domicile.

(c) To receive a large disposal system operational approval, for which the design is required to be completed by a licensed professional engineer/permitted designer, the following shall apply:

(1) The installation of the ISDS shall be inspected throughout the building process by the professional whose stamp and seal appear on the design or by an equivalently-qualified engineer/designer; and

(2) The applicant shall submit a written certification from the individual who inspected the system's installation pursuant to (1), above, that the ISDS has been installed in accordance with the plans approved by the department.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1004.07 Operation Approvals. To obtain an operation approval, the ISDS and building foundation or other hookup shall be installed in accordance with the approved plan. A stake marked "well" shall be placed by the permitted installer in the proposed well location if the well has not been installed at the time of the department's inspection of the installation.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1004.08 Use of Installer's Permit Number.

(a) Each permitted installer shall be responsible for all construction and repair or replacement activities performed under his or her permit number.

(b) All construction and repair or replacement activities conducted using a particular installer's permit number shall be performed under that installer's supervision.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

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Env-Wq 1004.09 Field Waivers Prohibited. No field waivers shall be granted to accommodate non-conformance with approved plans or inaccurate information on approved plans or for any other reason.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1004.10 Transfer of Approvals. All approvals issued under these rules shall be transferable to any future owner(s) of the property for which the approval was issued.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1004.11 Expiration of Construction Approvals.

(a) Except as provided in Env-Wq 1003.22(c), all construction approvals issued by the department shall expire as provided in Env-Wq 1003.02(e).

(b) If the ISDS is actively under construction when the construction approval will expire, including construction approvals granted under Env-Wq 1003.22, the owner or applicant may request an extension of up to 90 days past the expiration date by submitting a written request to the department. The department shall grant the extension if the request identifies the owner and applicant's names and addresses, the location of the property, the construction approval number, and the estimated time required to complete the ISDS, and confirms that the ISDS is actively under construction.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1004.12 Transfer of Construction Approvals.

(a) The department shall transfer a construction approval for which operational approval has not yet been issued from one owner to a new owner upon request of the new owner in accordance with this section.

(b) Prior to requesting a transfer of the construction approval, the new owner(s) shall:

- (1) Read, view, and possess prior approvals, plans, and any related conditions assigned thereto; and
- (2) Agree to abide by the previously-issued approvals.

(c) The new owner(s) shall submit a request for transfer in writing.

(d) The new owner(s) shall submit the following with the request to transfer the construction approval:

- (1) The construction approval number;
- (2) Identification of the owner(s) listed on the construction approval;
- (3) Identification of the person(s) to whom the construction approval is being transferred;
- (4) Recording information of the deed that transferred ownership of property, including the names of the grantor, grantee, town, county, registry and book and page numbers;
- (5) The location of the property, by tax map and lot number and street address and municipality; and
- (6) The following statement, agreed to and signed by the new owner(s):

"I/we, the undersigned, certify that I am/we are the present owner(s) of the property formerly of (name of former owner) and that I/we have read, viewed, and possess the prior approvals, plans, and any related conditions assigned thereto. I/we agree that I/we will abide by the previously-issued approvals. I/we fully understand that the individual sewage disposal system must be constructed in strict accordance with these plans and that no waivers to this construction approval will be allowed. Any changes will require a new submission, review, and approval prior to any construction. My/Our Title Reference is Book (number) Page (number), (County) Registry of Deeds, and briefly is for certain land known as (brief description) situated in (town), New Hampshire."

(e) The ISDS shall be constructed in strict accordance with the approved, transferred plans, and no waivers to this construction approval shall be allowed.

(f) Any changes to the ISDS design shall require a new submission, review, and approval prior to any construction.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1004.13 Approval For Water Supply. Where a community water system is to be provided, subdivision approval shall not be granted until the source, quality, quantity, storage, and design of distribution system have received prior approval pursuant to Env-Ws 300 or successor rules in subtitle Env-Dw.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1004.14 Relation to Other State Approvals. If an ISDS construction proposal requires state approvals or permits under other state statutes in order to be constructed in accordance with the plans, but is submitted without copies of those permits or approvals, then the department shall not approve the application until information is received by the department confirming that the other approvals have been obtained.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1004.15 Relocation or Expansion of Existing Buildings; Replacement of Demolished or Burned Buildings.

(a) Replacement of a building that has burned or otherwise been demolished, reconstruction of a building in a new location, or any expansion of an existing structure, shall be considered new construction which requires submission of an application, including plans and specifications, in accordance with Env-Wq 1003, unless all of the following are true:

(1) As compared to the structure it is replacing, the new structure will have:

- a. The same footprint;
- b. The same ridgeline;
- c. The same usable interior space; and
- d. The same use; and

(2) A valid construction and operating approval exists for the existing total sewage load, as determined by Env-Wq 1008.03.

(b) For property in the protected shoreland, no structure shall be replaced, relocated, or expanded without the owner first determining that such replacement, relocation, or expansion will not violate RSA 483-B.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1004.16 Expansion of Existing Use, Including Conversion to Full-time Occupancy. Pursuant to RSA 485-A:38, the owner shall comply with Env-Wq 1004.18 prior to:

(a) Modifying the use of any structure in a way that would result in any increase in the load on the ISDS, such as converting a room in a residence to an additional bedroom, adding a use to a commercial structure, or converting a residential only use to a residential plus commercial or commercial only use; or

(b) Commencing full-time occupancy of a structure that previously had not been occupied full time, as determined pursuant to Env-Wq 1004.17.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1004.17 Full-Time Use or Occupancy. An existing structure shall be considered to be used or occupied full-time, and so not subject to RSA 485-A:38, if, prior to January 1, 1990, it:

(a) Had been occupied for 9 or more months out of 12 consecutive months; or

(b) It met all of the following criteria:

- (1) The structure had and continues to have insulation;
- (2) The structure had and continues to have a heating system;
- (3) The structure was and continues to be served by a potable year-round water supply;
- (4) The structure had and continues to have indoor plumbing and a wastewater disposal system that does not discharge untreated waste water directly to surface waters; and
- (5) The structure was and continues to be served by an AC electric power supply.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1004.18 Application Requirements for Expansion of Existing Use, Including Conversion to Full-time Occupancy.

(a) A property owner required by Env-Wq 1004.16 to comply with this section shall determine whether the ISDS serving the structure is a state-approved ISDS that:

- (1) Meets the requirements of Env-Wq 1000 in effect at the time the expansion or conversion, as applicable, is proposed;
- (2) Is sized to accommodate the proposed use; and
- (3) Meets the minimum standards for use or occupancy of the town or city in which the property is located or the department.

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(b) No application for a new ISDS shall be required if:

- (1) The ISDS serving the structure meets the criteria specified in (a), above; and
- (2) The property is not within the shoreland zone protected under RSA 483-B.

(c) If the criteria of (b), above, are not met, the property owner shall work with a permitted designer to submit an "Application for Individual Sewage Disposal System Approval" in accordance with Env-Wq 1003.06, except that if the structure on the property is the property owner's domicile, the property owner may submit the application directly as allowed by RSA 485-A:35, II.

(d) Each application shall be signed as required by Env-Wq 1003.07 and Env-Wq 1003.08.

(e) No waivers to these rules shall be allowed to accommodate any expansion of an existing use or conversion to full-time occupancy.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1004.19 Fee. An application submitted pursuant to Env-Wq 1004.18(c) shall be accompanied by the fee specified in RSA 485-A:30 for new applications.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1004.20 Revocation of Approvals.

(a) For purposes of this section, "approval" means a subdivision approval, construction approval, operation approval, or waiver.

(b) Any approval issued by the department shall be issued based on the presumption that the information submitted as part of the application is true, complete, and not misleading.

(c) If, after the issuance of an approval, the department receives information indicating that the information upon which the approval was based was not true and complete or was misleading, the department shall commence an adjudicative proceeding in accordance with Env-C 200 to suspend or revoke the approval.

(d) If as a result of the hearing the department determines that the approval would not have been issued if true and complete information had been presented at the time of the application and that the site cannot be made to conform to the requirements of the rules, the department shall revoke the approval.

(e) If as a result of the hearing the department determines that the approval would not have been issued if the true and complete information had been presented at the time of the application but that the site can be made to conform to the requirements of the rules, the department shall suspend the approval and shall reinstate the approval upon receiving proof from the permittee that the site meets the requirements of the rules for approval.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1005 SUBDIVISIONS

Env-Wq 1005.01 Purpose. Subdivision rules are to assure to the greatest extent possible that each lot in a subdivision or the property on which a condominium is proposed can sustain on-site sewage disposal

indefinitely so that the purpose of RSA 485-A and Env-Wq 1001.01 can be maintained and smart growth can be encouraged, pursuant to RSA 9-B:3.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1005.02 Calculating Lot Sizes. In calculating lot sizes for Env-Wq 1005.03 and Env-Wq 1005.04, the following shall apply:

(a) When a lot for a single-family residence has more than one soil type, the lot size shall be calculated on the basis of the site loading for each soil type, subject to the following:

- (1) In all cases, the lot shall contain a minimum of 20,000 contiguous square feet of soil suitable for a receiving layer; and
- (2) At least 4,000 square feet of the contiguous area shall be suitable for the placement of an ISDS;

(b) To show the suitable contiguous area, the applicant shall:

- (1) Show the area on the plan with the test pit; or
- (2) Submit an acceptable ISDS design meeting all other requirements of Env-Wq 1003;

(c) When test pits indicate conditions other than those implied by the USDA/NRCS soil maps, the following shall apply:

- (1) If reported soil conditions are better than indicated by the USDA/NRCS soil maps and the submitted test pit data is not consistent with the department's on-site inspection, department staff shall request new test pits for inspection by department staff to determine the soil's capability for effluent disposal; and
- (2) If reported soil conditions are worse than indicated by the USDA/NRCS soil maps, the owner's data shall be used as a basis for calculating minimum lot size;

(d) Land created by filling with soil from off-site, as classified by the USDA/NRCS, shall be assessed on its own soil characteristics;

(e) Ponds, streams, perennially wet areas, and very poorly drained soils as defined in Env-Wq 1002.92 shall not be included in calculating minimum lot size, even though lot boundaries might include these areas;

(f) An interest in land conveyed from the owner to another by an easement or right-of-way, such as for utility lines or for passage, which reserves to the owner the right to dispose of sewage within the easement or right-of-way, may be counted in calculating the owner's lot size, provided however that the easement or right-of-way land area shall not also be counted as disposal area by the grantee;

(g) Areas of ledge outcrop shall not be included in the area calculated for sewage loading;

(h) The slope of the land shall be figured in the lot size requirements as follows:

- (1) Land with a slope in excess of 35% shall not be counted; and
- (2) The lot shall have an area with a slope less than 34 % suitable for the location of an EDA;

(i) The slope of a lot shall be determined by finding the average slope across the lot, measured perpendicular to the contours; and

(j) For lots with peaks, gullies, or ridges, a composite average slope shall be used.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1005.03 Minimum Lot Sizes - Residential, 1 to 4 Bedrooms.

(a) The minimum lot size for subdivisions for single family residences of not more than 4 bedrooms, where each lot has or is proposed to have an on-lot water supply and an on-lot ISDS, shall be determined in accordance with (b) through (h), below.

(b) Minimum lot size, in square feet (ft²), and factors for sewage loading shall be determined based on soil groups and slopes as set forth in Table 1005-1 below:

Table 1005-1
Minimum Lot Size - Residential, 1 to 4 Bedrooms; Sewage Loading Factors

Soil Group→ Slope ↓	1	2	3	4	5	6
0-8% or A/B	30,000 ft ² 1.0	39,000 ft ² 1.3	48,000 ft ² 1.6	43,500 ft ² 1.45	90,000 ft ² 3.0	See (c)
8-15% or C	33,000 ft ² 1.1	43,000 ft ² 1.43	53,000 ft ² 1.76	48,000 ft ² 1.6	Not Applicable	See (c)
15-25% or D	36,000 ft ² 1.2	46,800 ft ² 1.56	62,000 ft ² 2.08	52,000 ft ² 1.73		
25-35% or E	39,000 ft ² 1.3	50,700 ft ² 1.69	72,000 ft ² 2.4	57,000 ft ² 1.90	Not Applicable	See (c)

(c) Very poorly drained soils shall not be counted toward site loading to obtain subdivision approval.

(d) For purposes of determining minimum lot sizes, soil groups shall be as follows:

- (1) Group 1 soils shall be well-drained to excessively well-drained soils with rapid permeability;
- (2) Group 2 soils shall be well-drained soils with moderate permeability;
- (3) Group 3 soils shall be moderately well-drained and well-drained with hardpan;
- (4) Group 4 soils shall be bedrock relatively close to the surface;
- (5) Group 5 soils shall be poorly-drained soils; and
- (6) Group 6 soils shall be very poorly drained soils. Specific names of soils in each group are listed in the appendix to this chapter.

(e) For individual lots served or proposed to be served by an on-site ISDS and a municipal or approved community off-lot water supply, the lot size shall be at least 50% of the size shown in Table 1005-1 or 20,000 square feet, whichever is larger.

(f) For lots having or proposed to have an on-site water supply with off-lot ISDS, the off-lot area shall meet the required lot size established in accordance with Table 1005-1. In such cases, the lot upon which the structure will be built shall be of sufficient size to accommodate the full protective well radius established by Env-Wq 1008.06.

(g) For lots which have or are proposed to have off-lot ISDS and off-lot municipal or approved community water supply, local lot size regulations shall apply.

(h) Where ledge is encountered at less than 4 feet, Group 4 soil lot sizes shall apply.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1005.04 Lot Size - Commercial and Residential.

(a) Manufactured housing park sites with on-site wastewater disposal shall be at least 10,000 square feet multiplied by the factor listed in Table 1005-1.

(b) The minimum lot size for all other commercial and residential subdivisions shall be calculated by dividing the estimated daily flow (Q) of sewage in gallons by 2,000 and then multiplying by the sewage loading factor established in Table 1005-1, as indicated in the following formula:

$$\text{Lot Size} = (Q \text{ (gpd)}/2,000 \text{ (gpd/acre)}) \times \text{sewage loading factor}$$

(c) For purposes of (b), above, Q shall be the estimated daily flow calculated in accordance with Env-Wq 1008.03(c) or 600 GPD, whichever is greater, except that for campgrounds which existed prior to January 1, 1993, Q may be calculated in accordance with Env-Wq 1008.03(b) so long as no additional lots are created.

(d) The required area shall be exclusive of the land inside the protective radius of any on-lot well.

(e) Each studio or 1-bedroom apartment shall be figured as 1.5 bedrooms for sewage loading purposes, where a bedroom represents a sewage loading of 150 gallons per day.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1005.05 Open Space/Conservation Subdivisions.

(a) Subject to (b), below, the total land area required for a proposed open space/conservation subdivision shall be calculated in accordance with Env-Wq 1005.04(b), where Q is the total combined estimated daily flow of sewage from all proposed structures, calculated as the number of residential structures multiplied by the design flow for each structure or 600 GPD, whichever is greater.

(b) The following shall not be included when calculating the total usable land area of the subdivision:

(1) The full area of the protective radius of each well; and

(2) Any areas required to be deducted pursuant to Env-Wq 1005.02.

(c) Each lot served by an on-lot ISDS shall be of sufficient size to accommodate an EDA of twice the size of the EDA required for the proposed sewage load for that lot as specified in Env-Wq 1014.08 and any fill extensions associated with the ISDS.

(d) Documents creating an easement for the benefit of the individual lots to permanently protect the area against development that would be inconsistent with the conservation interest instrument requirements specified in Env-Wt 807 shall be submitted to the department with the application for all land areas that:

(1) Are not part of an individual lot but are otherwise part of the total area required for sewage loading as calculated pursuant to (a), above; or

(2) Constitute the area required for the protective radius of any well.

(e) The right to use areas dedicated to off-lot ISDS for purposes of wastewater disposal shall be specifically provided by an easement in the deed to the lot. Said rights shall be worded such that they are inseparable from the deed without express written consent from the department and all other governmental agencies having jurisdictional control.

(f) Lot owner responsibility for off-lot ISDS, off-lot water supplies, or both, that are dedicated to the open space/conservation subdivision shall be clearly established in documents submitted to the department and recorded in the chain of title for each lot.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1005.06 Lot Width. Each lot in a subdivision other than an open space/conservation subdivision shall be of sufficient width in the areas where the ISDS and the well are to be placed to accommodate all fill extensions specified in Env-Wq 1021.04 and the on-lot protective well radius specified in Env-Wq 1008.08.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1005.07 Easements and Flowage Easements.

(a) In any subdivision where effluent disposal will not be on the same lot(s) as the structure(s) that will generate sewage or other waste, a permanent easement shall be created for sewers to the disposal site(s) that includes provisions for maintenance and repair or replacement of the sewers and ISDS.

(b) For subdivisions where sewers cross or are proposed to cross roads or rights-of-way, a perpetual utility easement shall be established across the road or right-of-way that specifically accommodates the installation, maintenance, and repair or replacement of the sewer.

(c) No ISDS components shall be installed within areas subject to deeded rights of flowage.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1005.08 Test Pits and Percolation Tests for Subdivisions. The suitability of each lot that has or will have on-site sewage disposal shall be demonstrated by test pits in accordance with Env-Wq 1006 and a percolation test at each site dedicated to sewage disposal in accordance with Env-Wq 1007.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1005.09 Conversions to Condominiums.

(a) Subdivision plans shall be submitted in accordance with Env-Wq 1003 for any proposed conversion of existing developed property to condominium ownership if the resulting condominiums will not be served by a municipal sewer.

(b) Prior to receiving subdivision approval for conversion of existing developed property into condominiums, the applicant shall show that:

(1) The existing ISDS meet(s) the design standards existing at the time of application, by citing the construction and operation approvals for the ISDS; or

(2) The property proposed to be converted to condominiums can support an ISDS, by submission, in writing, of lot dimensions and loading calculations as per Env-Wq 1005.04.

(c) Drinking water supplies from groundwater aquifers for existing developed property that is to be converted to condominiums shall be protected by restricting land use and prohibiting all activity detrimental to water quality and quantity within the minimum distances established by Env-Wq 1008.05, Table 1008-3, based upon the average daily demand on the system.

(d) The protective well radius shall be preserved in accordance with Env-Wq 1008.07(b).

(e) The responsibility for maintenance, operation, replacement, and protection of the water supply and sewage disposal systems shall be clearly established by the condominium agreement.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1005.10 Manufactured Housing Parks.

(a) Subdivision plans for a manufactured housing park shall be submitted in accordance with Env-Wq 1003 if the resulting park will not be served by a municipal sewer.

(b) Lots within manufactured housing parks shall conform to the size requirements of Env-Wq 1005.04(a).

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1005.11 Recreational Campgrounds.

(a) Each site within a recreational campground at which pressurized potable water hook-ups are available and which is used by the same recreational vehicle (RV) for a period of more than 3 consecutive weeks shall be provided with an on-site sewage collection system, which shall convey the sanitary wastes from the RV to either an on-lot or off-lot ISDS approved by the department in accordance with these rules.

(b) Each site within a recreational campground at which pressurized potable water hook-ups are available and which is used by the same RV for a period of 3 consecutive weeks or less, shall not require an on-site sewage collection system, provided that sanitary service stations, sanitary service vehicles, and/or rest rooms are available at the campground to handle the disposal of all wastewater.

(c) At sites where no pressurized water is provided, the campground shall provide means of sanitary waste disposal such as sanitary service stations, sanitary service vehicles, and/or rest rooms.

(d) Subdivision plans for recreational campgrounds shall be submitted in accordance with Env-Wq 1003.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1005.12 Non-Building Lots.

(a) The purpose of this section is to accommodate the creation of lots for public purposes on which wastewater will not be generated or disposed or which do not meet the criteria established for minimum lot size under these rules. Such lots are typically created for purposes of providing public access to, or public use

of, natural resources such as lakes, rivers, wildlife preserves, or parks, or to provide green space or open space in accordance with RSA 674:21-a.

(b) For purposes of this section, the following definitions shall apply:

(1) "Anti-merger clause" means a clause in a legal document such as a deed which has the legal effect of precluding the ownership of a conservation restriction from merging with the fee ownership of the land underlying the restriction in such a way as to extinguish or otherwise eliminate the restriction;

(2) "Building lot" means:

a. A proposed lot on which a building from which wastewater will discharge either:

1. Exists at the time of application for subdivision; or

2. Is intended to be erected at some time in the future; or

b. A proposed lot which meets the minimum lot size requirements of Env-Wq 1005.02, Env-Wq 1005.03, Env-Wq 1005.04, or Env-Wq 1005.06 through Env-Wq 1005.11, as applicable, regardless of whether a building from which wastewater discharges is intended to be erected;

(3) "Conservation restriction" means "conservation restriction" as defined by RSA 477:45, I, except that for purposes of this section:

a. The term is limited to the prohibition against:

1. Constructing a building from which wastewater will be discharged; and

2. Discharging wastewater to the land which is subject to the conservation easement; and

b. The easement is valid and enforceable until such time as the lot is served by municipal sewer, provided, however, that nothing herein shall prevent the easement from lasting in perpetuity if the grantor and grantee of the easement so desire;

(4) "Conservation restriction grantee" means an agency of federal, state, county, or local government or a private non-profit legal entity which has as one of its primary purposes the holding of conservation restrictions so as to preserve land in an undeveloped state; and

(5) "Non-building lot" means a proposed lot on which a building from which wastewater will discharge does not exist at the time of application for subdivision and will not be erected, and which does not meet the applicable requirements of Env-Wq 1005.02, Env-Wq 1005.03, Env-Wq 1005.04, or Env-Wq 1005.06 through Env-Wq 1005.11.

(c) Any person who wishes to create one or more non-building lots as part of a subdivision otherwise subject to these rules shall comply with the requirements of this section for such lot(s).

(d) Each proposed non-building lot shall be identified on the subdivision application and plan with the words "NON-BUILDING LOT" in capital letters and in boldface type or underlined, or both, in a plain font of sufficient size to be readily noticed by the average person.

(e) Any approval of a subdivision containing one or more non-building lots shall identify the non-building lot(s) by lot number and the words "NON-BUILDING LOT" in capital letters on the subdivision approval.

(f) Notwithstanding Env-Wq 1003.04, for any proposed non-building lot(s) the applicant shall not be required to provide test pit or percolation test data for the proposed non-building lot(s).

(g) Applications for subdivisions creating one or more non-building lots which meet the requirements of (c) through (f), above, shall be approved contingent upon execution of the conservation restriction pursuant to RSA 477:3, acceptance of the conservation restriction pursuant to RSA 477:47, and recording of said conservation restriction in the chain of title of the property on which it is to be created pursuant to RSA 477:3-a.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1006 TEST PITS

Env-Wq 1006.01 Location of Test Pits.

(a) For subdivisions where there is ledge within 4 feet of the surface, the test pit shall be in the location on which the bed is to be placed to prove that a suitable location exists.

(b) For ISDS, the test pit shall be dug at the proposed bed location.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1006.02 Depth of Test Pits. The test pit shall be of sufficient depth to inspect soil to 4 feet below the bottom of the proposed bed location.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1006.03 Size of Test Pits. The test pit shall be large enough to visually inspect the soil.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1006.04 Number of Test Pits.

(a) For each lot in a subdivision where ledge is encountered at less than 4 feet, the applicant shall dig test pits to satisfy the requirements of (c), below. The number of test pits shall be determined by a permitted designer, but in no event shall less than 2 test pits be dug.

(b) For ISDS, the applicant shall dig at least one test pit at each proposed effluent disposal site.

(c) For ISDS where ledge is encountered at less than 4 feet, the applicant shall dig a test pit at opposite corners of the disposal area and 35 feet down-slope of the system. If either of the down-slope test pits is less than 3 feet to ledge, then probes shall be required at a 45 degree angle from the bed corners or as required to prove receiving layer requirements.

(d) All holes dug to test the soil, except for holes dug to determine a wetland boundary in accordance with Env-Wq 1014.03, shall be considered test pits.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1006.05 Test Pit Soil Description.

(a) The permitted designer shall record, for each test pit dug, a description of the predominant soil horizons, including:

- (1) Color notations based on the Munsell Soil Color Charts, 2000 edition;
- (2) Soil structure;
- (3) Soil texture;
- (4) Soil consistency;
- (5) Redoximorphic features; and
- (6) Depth range for each soil horizon.

(b) The terminology used shall be in conformance with the technical standards of the USDA/NRCS National Cooperative Soil Survey, based on the Field Book for Describing and Sampling Soils: Version 2.0, National Soil Survey Center, USDA/NRCS, 2002.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1006.06 Recordation, Submission, and Verification of Test Pit Data.

(a) All test pit data shall be logged by or under the supervision of a permitted designer, except that a property owner may log the data on the test pit(s) for purposes of an application for an ISDS for his or her own domicile.

(b) Data on all test pits dug shall be submitted in writing to the department.

(c) For an ISDS application, the test pit for which data is submitted and relied upon shall have been observed by the applicant or a person under the direct control or supervision of the applicant.

(d) When test pit data is submitted separately from plans and specifications, the data shall bear the stamp of a permitted designer, except that data logged by a property owner for purposes of an application for an ISDS for his or her own domicile shall bear the signature of the property owner.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1006.07 Refill of Test Pits. Each test pit shall be promptly refilled.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1006.08 Additional Test Pits Required.

(a) The department shall require a new test pit to be dug for inspection by the department if the data submitted for a test pit as part of an application is internally inconsistent or is inconsistent with any other information received by the department.

(b) The department shall require additional test pit(s) to be dug or test probe(s) to be performed if the data submitted pursuant to Env-Wq 1006.04(a) is insufficient to demonstrate that a lot or proposed lot satisfies the requirements of Env-Wq 1005.02 and Env-Wq 1005.03 or Env-Wq 1005.04, as applicable.

PART Env-Wq 1007 PERCOLATION TEST

Env-Wq 1007.01 Location of Percolation Test. A percolation test shall be conducted in undisturbed soil in the location of the proposed effluent disposal area. If more than one test is conducted, the test holes shall be spaced at least 20 feet apart.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1007.02 Depth of Percolation Test.

(a) The percolation test shall be conducted in the most restrictive permeable soil horizon above the seasonal high water table and below the A horizon.

(b) Where no A horizon exists, the percolation test shall be taken in the most restrictive layer above the seasonal high water table.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1007.03 Distance from Test Pits. The percolation test shall be at least 5 feet from any test pit to assure that it is conducted in undisturbed soil.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1007.04 Size of Test Hole. The percolation test hole shall be dug with horizontal dimensions of from 4 to 12 inches and vertical sides to at least 14 inches into the soil layer specified in Env-Wq 1007.02.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1007.05 Percolation Test Procedures. Subject to Env-Wq 1007.06, the individual conducting the percolation test shall:

(a) Remove any smeared soil surfaces and provide a natural soil interface into which water will percolate;

(b) Remove all loose material from the hole;

(c) Add 2 inches of coarse sand or fine gravel to protect the bottom of the hole from scouring and sediment;

(d) Fill the hole with clear water to a minimum depth of 12 inches over the gravel and maintain water in the hole for at least 2 hours, or until the drop in water as measured in accordance with (e), below, reaches steady state;

(e) Determine the rate of water loss 2 hours after water is first added to the hole to insure that the soil is given ample opportunity to swell and to approach the condition it will be in during the wettest season of the year;

(f) Add clear water to bring the depth of water in the hole to approximately 6 inches over the gravel, after the rate of water loss has stabilized;

(g) Measure the drop in water level from a fixed reference point, at approximately 10 minute intervals for 1 hour, refilling 6 inches over the gravel as necessary; and

(h) Use the drop that occurs during the final 30-minute period to calculate the percolation rate.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1007.06 Percolation Tests in Sandy Soils. The soaking procedure described in Env-Wq 1007.05(d) and (e) shall not be required in sandy soils containing little or no fines, but the test may be made after the water from 2 fillings of the hole has completely seeped away.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1007.07 Size of Bed. The size of the bed shall be based on the percolation rate taken in the soil layer specified in Env-Wq 1007.02.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1008 DESIGN REQUIREMENTS FOR ALL SYSTEMS

Env-Wq 1008.01 Lot Loading Capacity.

(a) The maximum allowable loading of sewage for subsurface disposal shall be 2,000 gallons per day (GPD) per acre with the best soil and slope conditions.

(b) The maximum sewage loading shall be reduced or the required land area increased with poorer conditions in accordance with Env-Wq 1005.03 or Env-Wq 1005.04, as applicable.

(c) An application for replacement of an ISDS in failure or to replace the ISDS serving a building destroyed by fire shall be exempt from the lot size requirements of (a) and (b), above, unless the sewage loading is proposed to be increased.

(d) A lot of record which does not qualify under (c), above, and which does not meet the loading criteria of (a) or (b), above, shall be eligible for approval of an ISDS only if the following requirements are met:

(1) The building on the lot is strictly residential, as defined by Env-Wq 1002.74;

(2) The ISDS proposed for the lot meets all other provisions of Env-Wq 1000;

(3) The application is accompanied by:

a. Proof that the lot was created in accordance with RSA 149-E or RSA 485-A; or

b. Deed(s) demonstrating that the lot was created prior to the dates specified in Env-Wq 1004.05(a)(1), (2), or (3), as applicable;

(4) The plan indicates that low-flow fixtures shall be installed in the building;

(5) The lot is restricted to sewage flows of 300 GPD for 2 bedrooms, in accordance with Table 1008-1; and

(6) The plan shows the footprint of the proposed residence, including the exterior and interior dimensions and the total usable interior living space.

(e) If approval is issued pursuant to (d), above, the property owner shall record the approval showing that the sewage loading is limited to 300 GPD and that the total usable interior living space is limited to that shown on the plan at the registry of deeds for the county in which the property is located in the chain of title for the property.

(f) A condominium that meets the criteria of Env-Wq 1004.05(c) and that does not meet the loading criteria of (a) or (b), above, shall be eligible for approval of an ISDS to replace an existing ISDS only if:

(1) The fixtures in each condominium unit are low-flow fixtures or will be replaced within 90 days of the issuance of construction approval with low-flow fixtures; and

(2) There will be no expansion of the condominium or of the size or use of the individual units in the condominium.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1008.02 System Capacity.

(a) The maximum allowable design capacity for an ISDS without a groundwater discharge permit as required under RSA 485-A:13 or RSA 485-C shall be 20,000 GPD.

(b) Systems with design capacity of 2,500 GPD or more shall have at least 2 EDA separated by at least 20 feet.

(c) The minimum size of system allowed shall be designed to accommodate a sewage flow of 300 GPD for commercial or non-commercial uses.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1008.03 Daily Flow Volume. In order to determine the appropriate size of the septic system components, such as the septic tank, pipe, and EDA, the daily flow volume of sewage in gallons per day shall be determined by one of the following methods:

(a) For new uses, by using metered water readings for similar uses, which shall be determined as follows:

(1) By finding the average of water meter readings and multiplying the average by a minimum peaking factor of 2 for commercial light flow or a maximum peaking factor of 3 for commercial heavy flow; or

(2) By measuring 6 months of consecutive daily meter readings, in which case the system shall be designed based on the highest daily flow without application of a peaking factor;

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(b) For existing uses, by using the metered water readings for the use in accordance with (a)(1) or (a)(2) above; or

(c) For existing or new uses, by using the unit design flow figures as listed in Table 1008-1, below, subject to (d), below:

Table 1008-1 Unit Design Flow Figures

USE	Design Flow
AIRPORTS	5 GPD/Transient plus 10 GPD/Employee
APARTMENTS:	
1-Bedroom or Studio	225 GPD
2 or more bedrooms per Apartment	150 GPD/Bedroom
BARS, LOUNGES	20 GPD/Seat
BED & BREAKFAST	60 GPD/Guest based on the greater of 2 guests per room or the actual number of guests the room is designed to accommodate, plus 10 GPD/Employee
CAMPS:	
Campground with Central Comfort Station	45 GPD/ Site, plus 20 GPD/Site for the dump station
Recreational Campgrounds with 3-way hookups	60 GPD/Site
Construction Camps	50 GPD/Person
Day Camps (not including meals)	15 GPD/Person
Dining Facility	3 GPD/Person/Meal
Residential Youth Recreation Camps	25 GPD/Person plus 3 GPD/Person/Meal
CATERERS – Function Rooms	12 GPD/Patron
CHURCHES:	
Sanctuary Seating	3 GPD/Seat
Church Suppers	12 GPD/Seat
COUNTRY CLUBS – PRIVATE	
Dining Room	10 GPD/Seat
Snack Bar	10 GPD/Seat
Locker & Showers	20 GPD/Locker
DAY CARE CENTERS	10 GPD/Person
DENTISTS	10 GPD/Chair plus 35 GPD/Staff Member
DOCTOR’S OFFICES	250 GPD/Doctor
DOG KENNELS	50 GPD/Kennel
DWELLINGS:	
Private Residences	300 GPD plus 150 GPD for each bedroom over 2
Rooming Houses – With Meals	60 GPD/Person
Rooming Houses – Without Meals	40 GPD/Person
Senior Housing (55 or older)	125 GPD/2 Bedroom unit
FACTORIES (Exclusive of Industrial Waste):	
Without Cafeteria or Showers	20 GPD/Person

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With Cafeteria, No Showers	25 GPD/Person
With Cafeteria and Showers	35 GPD/Person
Warehouses	20 GPD/Person
FIRE STATIONS – Without full-time employees; without floor drains or food preparation	5 GPD/Person
FOOD SERVICE:	
Cafeteria or Eat in, plus toilet and kitchen waste	40 GPD/Seat
Cafeteria or Eat in, paper service, plus toilet and kitchen waste	20 GPD/Seat
Ice cream dipper	100 GPD/dipper
Kitchen Waste only	3 GPD/Meal served
Bars and lounges	20 GPD/Seat plus 35 GPD/Employee
Function Rooms	12 GPD/Seat
GYMS	10 GPD/Participant plus 3 GPD/Spectator seat
HAIRDRESSERS	150 GPD/Chair plus 35 GPD/Operator
HOSPITALS	200 GPD/Bed plus 35 GPD/Employee
HOTELS AND MOTELS:	
If plan shows that only one double bed can be accommodated	100 GPD/Room plus 10 GPD/Employee
All other	200 GPD/Room plus 10 GPD/Employee
INSTITUTIONS OTHER THAN HOSPITALS	See Residential Institutions
LAUNDROMATS, COIN-OPERATED	500 GPD/Machine
MANUFACTURED HOUSING PARKS	150 GPD/ Bedroom/Site with 300 GPD/Site minimum
MOTELS, see HOTELS	
NAIL SALONS	5 GPD/Customer plus 35 GPD/Employee
NURSING HOMES	125 GPD/Bed plus 35 GPD/Employee
OFFICE BUILDINGS:	
Without Cafeteria	15 GPD/Employee
With Cafeteria	20 GPD/ Employee
Unspecified Office Space	15 GPD/100 Square Feet
PICNIC PARKS	See Recreational Facilities
RECREATIONAL FACILITIES	
Toilet Waste Only	5 GPD/Person
With Showers and Toilets	10 GPD/Person
RESIDENTIAL INSTITUTIONS OTHER THAN HOSPITALS	135 GPD/Bed plus 35 GPD/Employee
RESTAURANTS	See Food Service
SCHOOLS:	
Boarding	100
Day, Without Gym, Cafeteria, or Showers	10
Day, Without Gyms or Showers, with Cafeteria	15
Day, With Gyms, Showers, and Cafeteria	25

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SENIOR HOUSING (55 or older)	125 GPD/2 Bedroom unit
SERVICE STATIONS	75 GPD/Island plus 35 GPD/Employee
SKATING RINKS	See Gyms
SKI AREAS	See Recreational Facilities
STORES:	
Dry Goods, stand-alone	5 GPD/100 Square feet
Dry Goods Stores in Shopping Centers	100 GPD/Store
Supermarkets with Meat Dept. without Garbage Grinder	7.5 GPD/100 Square feet
Supermarkets with Meat Dept. with Garbage Grinder	11 GPD/100 Square feet
SWIMMING POOLS, Public	See Recreational Facilities
TENNIS COURTS	See Recreational Facilities
THEATERS	3 GPD/Auditorium Seat
TOWN HALLS	5 GPD/Seat for total seating capacity
TOWN OFFICES	15 GPD/Office employee plus 5 GPD /Transient
TRAVEL TRAILER PARKS, see CAMPS	
WAREHOUSES	See Factories

(d) For any structure with a combination of uses, such as a day camp that serves meals, a recreational facility with a cafeteria, or a ski area that also has a day care, the loading shall be the combined total of the loading for the separate uses.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1008.04 Minimum Distances.

(a) The minimum separation distance in feet between components of an ISDS and the identified receptors shall be as specified in Table 1008-2, subject to the provisions of (b) through (h), below:

Table 1008-2 Minimum Separation Distances (in Feet)

Receptor↓	Component→	Septic Tank	Effluent Disposal Area	Sewer Line
Surface Water		75	75	
Poorly Drained Jurisdictional Wetland		50	50	
Very Poorly Drained Jurisdictional Wetland		75	75	
Open Drainage		75	75	
Culvert, Tight Pipe		10	25	
Culvert Opening		50	75	
Catch Basin		35	35	
Interceptor Drains Below Finished Grade of Effluent Disposal Area		10	25	10
Interceptor Drains Above Finished Grade of Effluent Disposal Area		10	10	5
Private Wells, on-site		75	75	
Private Wells, off-site		75	75	
Community Wells		200	200	

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Reservoirs	75	75	
Municipal Wells	400	400	400
Water Lines, pressure	10	25	10
Water lines, suction	50	50	50
Property lines	10	10	10
Foundation, any type, with Foundation Drains	5	15	
Foundation, full cellar, without Foundation Drains	5	10	
Foundation, slab, without Foundation Drains	5	5	
Foundation Drains Outfall Pipe (Solid)	5	5	
Foundation Drain Outfall (Discharge)	25	25	
Top of Natural Embankment or Natural Steep Slope	5	20	

(b) In-ground swimming pools shall not be located within 35 feet down-slope of an EDA or within 10 feet in any direction of an EDA.

(c) The distance between a septic tank and surface water, open drainage, or a private on-site well may be reduced to 50 feet if pipe having an SDR of 26 or equivalent is used and the tank is sealed and grouted to prevent infiltration and exfiltration.

(d) The distance between a septic tank or EDA and open drainage may be reduced to 35 feet where the open drainage and associated culverts, such as a roadside ditch, does not intercept the seasonal high groundwater.

(e) The distance between a water line and an EDA may be reduced to 10 feet, and the distance from a water line to a septic tank may be reduced to 5 feet, if the waterline is sleeved in continuous length SDR 35 pipe or equivalent, to the distance specified in Table 1008-2.

(f) For any well for which a wellhead protection area has been established pursuant to RSA 485-C, the distance between the well and the septic system components shall be as established in Env-Ws 378 or successor rules in subtitle Env-Dw.

(g) For purposes of approving an ISDS to replace an existing residential ISDS on a lot created after September 1, 1989, where the ISDS components cannot be installed in accordance with Table 1008-2, above, due to the residence being constructed in other than the location shown when the original approval was issued, the separation distances shall be as close to the specified distance as possible.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1008.05 Nitrate Setbacks to Property Lines.

(a) EDA shall be located at or beyond the minimum distances from property lines in the down-gradient direction as shown in Table 1008-3, below.

(b) Perpendicular to the gradient (“side-gradient”), the required minimum distance to a property line shall be one-half of the distance shown in Table 1008-3, below.

(c) Up-gradient of the EDA, the minimum distance to a property line shall be one-quarter the distance shown in Table 1008-3, below.

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(d) Groundwater easements on abutting property may be used to meet setback distance requirements.

(e) If the applicant submits a hydrogeological analysis of the property which shows that the requirements of Env-Wq 402 will be met, the minimum setback distances shall be reduced.

(f) For non-aggregate flows of up to 999 GPD, the setback distance to any property line shall be as specified in Table 1008-2; and

(g) If the setback distances for 2 or more EDA overlap, the EDA shall be considered one system and the setback distance shall be determined by the combined flow of the leach fields, in accordance with Table 1008-3.

(h) If more than one EDA is on a single lot and the combined design flows are 1,000 GPD or more, all components of the EDA, other than fill extensions, shall meet setback distances specified in Table 1008-3 below:

**Table 1008-3 Minimum Nitrate Setback Distances to Property Line (in feet)
for Aggregate Flows Discharged onto a Single Lot**

Design Flow, GPD	Hydraulically Downgradient	Hydraulically Sidegradient	Hydraulically Upgradient
1,000-1,100	55	28	14
1,101-1,200	60	30	15
1,201-1,300	65	33	17
1,301-1,400	70	35	18
1,401-1,500	75	38	19
1,501-1,600	80	40	20
1,601-1,700	85	43	22
1,701-1,800	90	45	23
1,801-1,900	95	48	24
1,901-2,000	100	50	25
2,001-2,100	105	53	27
2,101-2,200	110	55	28
2,201-2,300	115	58	29
2,301-2,400	120	60	30
2,401-2,500	125	63	32
2,501-3,000	150	75	37
3,001-3,500	175	88	44
3,501-4,000	200	100	50
4,001-4,500	225	113	57
4,501-5,000	250	125	63
5,001-6,000	275	138	69
6,001-7,000	300	150	75
7,001-8,000	320	160	80
8,001-9,000	340	170	85
9,001-10,000	350	175	88
10,001-15,000	435	213	107
15,001-19,999	500	250	125

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

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Env-Wq 1008.06 Protective Well Radii - Distance.

(a) A protective area designated as the "protective well radius" shall be maintained around every private commercial or non-commercial drinking water well.

(b) Subject to the provisions of Env-Wq 1008.08, the protective area shall be a uniform circle having a radius determined based on the total proposed daily sewage flow, as set forth in Table 1008-4, below:

Table 1008-4 Protected Well Radii for Shallow or Dug Wells or Drilled Bedrock Wells

<u>Daily Sewage Flow (GPD)</u>	<u>Radius (ft.)</u>
0-750	75
751-1440	100
1441-4320	125
4321-14,400	150
14,401-28,800	175
28,801-57,600	200
57,601-86,400	250
86,401-115,200	300
115,201-144,000	350
greater than 144,001	400

(c) A protective well radius that is fully recognized or which is accorded full recognition by these rules means that the radius shall not be reduced or encroached upon by any septic system component on an abutting lot.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1008.07 Protective Well Radii - Uses.

(a) Unless precluded by other state or local regulation, the land surface within a protective well radius may be used for the normal residential or commercial surface activities associated with the structure served by the well, such as buildings, parking areas, recreational activities, and surface water drainage control structures.

(b) No portion of a septic tank, EDA, pump chamber, or other such septic system component shall be within a protective well radius that is accorded full recognition pursuant to Env-Wq 1008.08, except as allowed by Env-Wq 1008.04(c). Pipes connecting such components may be within the protective well radius provided they have an SDR of 26 or equivalent.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1008.08 Recognized Extent of Protective Well Radii.

(a) Pursuant to RSA 485-A:30-b, I(b) and (c), the protective well radius shall be contained wholly within the boundaries of any lot created after August 20, 1989, and shall be contained wholly within the boundaries of an existing lot of record to the extent possible. Any protective well radius wholly on the lot shall be accorded full recognition. Where the protective well radius extends across the property line, the portion of the protective well radius on the lot shall be accorded full recognition.

(b) Any portion of a protective well radius extending across a property line onto an easement duly granted by the owner of record of the abutting property and recorded in the registry of deeds for the county in which the property is located shall be accorded full recognition. A copy of the recorded easement shall be submitted with the application.

(c) Any portion of a protective well radius extending across a property line onto land that is precluded from development shall be accorded full recognition without a deeded right to use the abutting property, provided that:

- (1) The use of the abutting property is clearly identified on the plan; and
- (2) The applicant submits a copy of evidence of the development preclusion of the abutting land, as described in (d), below, with the application.

(d) For purposes of (c), above, evidence of development preclusion shall be determined with reference to the reason why the land is precluded from development, as follows:

- (1) Land identified in RSA 227-H:5 shall be evidenced by a copy of the relevant statutory section;
- (2) Land held under the terms of RSA 227-M where the deed precludes development of buildings or subsurface waste disposal systems within the affected area shall be evidenced by a copy of the deed;
- (3) Any surface water shall be evidenced by a copy of the portion of a map locating the surface water;
- (4) Any wetland as defined by Env-Wq 1002.94 shall be evidenced by a certification from a permitted designer; and
- (5) Land within a municipal property line septic system set-back shall be evidenced by a letter from a duly-authorized municipal official stating that the property line set-back was validly adopted and is currently effective.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1008.09 Overlapping Protective Well Radii. Owners of abutting lots may agree to overlap their respective protective well radii for their mutual benefit. In order for the well radii to be accorded full recognition, any such agreement shall be evidenced by cross-easements which shall be duly executed and recorded.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1008.10 Non-conforming Protective Well Radii.

(a) Pursuant to RSA 485-A:30-b, I(b), in the case of a new commercial building or an existing commercial building where the sewage loading is projected to increase, if the protective well radius cannot be maintained entirely on-lot, on a deeded easement, or on land otherwise precluded from development as set forth in Env-Wq 1008.08(c), then the application shall be denied. For purposes of this section, a private residence also being used for commercial purposes where the total flow exceeds 600 GPD shall be deemed to be a commercial building.

(b) Pursuant to RSA 485-a:30-b, I(c), if the protective well radius for a non-commercial building cannot be wholly maintained on an existing lot of record or onto a deeded easement or land otherwise precluded from development as set forth in Env-Wq 1008.08 (c), due to the size or other physical characteristics of the lot, the recognized protective well radius shall extend no further than the property line. For purposes of this provision, a non-commercial building includes a private residence also being used for commercial purposes where the total flow is equal to or less than 600 GPD. When the protective well radius will not be wholly maintained on the lot pursuant to this section, the owner of the property shall execute and record the standard release form pursuant to Env-Wq 1008.12 acknowledging that the actual well radius does not conform to the requirements of Env-Wq 1005.09 or Env-Wq 1008.06.

(c) When the well cannot be installed as shown on the plan due to obstacles of a permanent nature, and the well radius cannot be maintained on-lot or on an area designated in Env-Wq 1008.08 as a result of the alternative placement, the property owner shall, as required by RSA 485-A:30-b, I(g), submit to the department a copy of the amended plan and the standard release form pursuant to Env-Wq 1008.12. The standard release form shall provide written acknowledgment that the consequences of the alternate well location are fully understood by the owner or the owner's agent prior to well installation. Buildings constructed prior to the installation of the well or naturally-occurring geological or topographical features such as ledge outcrops or ravines, which prevent the well construction apparatus from being brought to the designated location, shall be considered obstacles of a permanent nature.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1008.11 Recordation of Descriptive Location of Well.

(a) Any time the recognized protective well radius is less than the radius specified in Env-Wq 1008.06, the applicant shall record a narrative description of the actual location of the well which shall include distances and directions from at least 2 permanent features of the lot, such as an iron pin marking a corner boundary or structure foundation.

(b) The description so prepared shall:

- (1) Comply with the requirements of RSA 478:4-a; and
- (2) Be recorded by the owner in the chain of title to the property.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1008.12 Standard Release Form for Protective Well Radii.

(a) The applicant shall provide the following on the standard release form:

- (1) Whether the release is being executed because the well has been moved from the location shown on the approved plan or because the well does not fit on an existing lot of record;
- (2) The name and current mailing address of each owner of the lot;
- (3) The location of the property, including street address, town, county, tax map and lot number, and current deed reference;
- (4) If applicable, the subdivision approval number and construction approval number;
- (5) A statement that each owner understands that the well will be located closer than the recommended extent of a protective well radius to the property line;

(6) A statement that each owner understands that current state law does not protect the well beyond the boundary of the property and that the rules of the department allow an individual sewage disposal system to be installed as close as 10 feet to the property line, which might result in an individual sewage disposal system on abutting property being installed closer than 75 feet to the well;

(7) A statement that each owner understands that s/he cannot prevent an individual sewage disposal system from being installed on abutting property within 10 feet of the property boundary solely on the basis of the well location;

(8) A statement that each owner understands that with proper well construction, including drilling the well into bedrock, casing the well, and sealing the casing, the risk of contamination from any individual sewage disposal system closer than 75 feet to the well can be minimized; and

(9) A statement that each owner understands that s/he might have no recourse against the State of New Hampshire or any owner of the abutting property if the well becomes contaminated due to the decreased set-back distance.

(b) Each owner of the property shall sign and date the release form and shall cause the form to be recorded at the appropriate registry of deeds.

(c) The owner(s) of the property shall submit a copy of the executed release form to the department and to the local code enforcement officer or other local official designated by the municipality.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1009 SEWER LINES

Env-Wq 1009.01 Crossing Water Lines.

(a) Subject to (b), below, where water lines must cross a sewer line, the sewer line shall be at least 18 inches below the water line.

(b) The water line may be closer than 18 inches above the sewer line if the water line is encased in concrete or pipe having an SDR of 26 for a distance of 10 feet on both sides of the sewer line.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1009.02 Manholes and Clean-outs in Long Runs.

(a) Manholes shall be provided every 350 feet in long sewer runs and at each change in slope or direction.

(b) Manholes shall conform to standards set for municipal installations in Env-Wq 700.

(c) When the run of a gravity sewer is greater than 100 feet but less than 350 feet with no change in slope or direction such that manholes are not used, a clean-out shall be provided every 100 feet.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

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Env-Wq 1009.03 Pipe Under Wheel Loads. Pipe used under wheel loads shall be:

(a) Designed and installed to meet AASHTO H-20 specifications, as published in the AASHTO LRFD Bridge Design Specifications, 4th edition; and

(b) Buried at least 4 feet underground or insulated.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1009.04 Calculating Infiltration. Sewer and manhole infiltration shall be figured into the flow figures established by Env-Wq 1008.03 for sewers over 100 feet long as follows:

(a) Pipe infiltration shall be figured as 300 gallons per inch diameter per mile per day; and

(b) Manhole infiltration shall be figured as one gallon per vertical foot per day.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1009.05 Slope of Pipe.

(a) The slope of the pipe from the building to the septic tank shall be not less than 2% and not more than 15%.

(b) The pipe shall be below ground surface for not less than 10 feet leading to the septic tank inlet.

(c) The slope of the pipe from the septic tank to the distribution box shall be not less than 1/8 inch per foot.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1010 SEPTIC TANKS

Env-Wq 1010.01 Liquid Capacity of Septic Tanks.

(a) Subject to (b) through (g), below, and Env-Wq 1010.14, the minimum septic tank capacity for a single-family residence having no more than 2 bedrooms shall be 1,000 gallons.

(b) For a duplex house or a duplex condominium, sometimes also called a condex, each half shall be considered a separate single-family residence for purposes of sizing the septic tank.

(c) For each additional bedroom up to 10, septic tank size shall be increased by 250 gallons per bedroom.

(d) For residential buildings over 10 bedrooms, septic tanks shall be sized in accordance with Env-Wq 1010.02.

(e) If a garbage grinder is or will be used in the structure served by the septic tank, the size of the septic tank shall be increased by 50%.

(f) Subject to (g), below, where raw sewage is to be pumped into the septic tank, whether or not a garbage grinder is or will be used, the septic tank volume shall be twice the volume otherwise required by this section or Env-Wq 1010.02, as applicable, which shall be accomplished by tank duplication or compartmentalization.

(g) When raw sewage is pumped only from a set of basement bathroom fixtures to the building's gravity sewer, the total capacity of the septic tank shall be increased by:

- (1) At least 250 gallons if:
 - a. Only one compartmentalized septic tank is used; or
 - b. A separate septic tank is used that will connect to the main septic tank for the structure; and
- (2) At least 1,000 gallons if a separate septic tank is used that will connect directly to the EDA.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1010.02 Septic Tank Capacity for Commercial Structures and Residences Having More Than 10 Bedrooms. Liquid capacity for septic tanks serving commercial structures and residences with more than 10 bedrooms shall be as follows:

(a) For flows of 300 GPD to less than 600 GPD, the septic tank size shall be the same as that for an equivalent residential sewage load;

(b) For flows of at least 600 GPD but less than 1,500 GPD, the volume shall be 2 times the daily sewage flow; and

(c) For flows of 1,500 GPD or more, the volume shall be 2,000 gallons plus 70% of the daily flow.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1010.03 Watertightness of Septic Tanks.

(a) Septic tanks shall be watertight and constructed of materials not subject to corrosion or decay, such as concrete or fiberglass.

(b) A concrete tank shall be sealed so as to be watertight if constructed from separate sections.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1010.04 Backfill Around Septic Tanks. Backfill around septic tanks shall be made in thin layers compacted in a manner that shall not damage the structural integrity of the tank.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1010.05 Access to Interior of Septic Tank.

(a) Access shall be provided to each compartment of a septic tank for inspection and cleaning by means of a removable cover or a manhole that is:

- (1) At least 23 inches in diameter;
- (2) Of a shape or otherwise of a construction that prevents the cover from falling into the tank; and

- (3) At a depth of no more than 6 inches below finished grade.
- (b) Both the inlet and the outlet baffles shall be accessible.
- (c) A septic tank with an effluent filter shall have a riser which extends to finished grade.
- (d) The bottom of the septic tank shall not be more than 15 feet below the grade of the area where the septage pumping truck will park when the tank needs to be pumped out.
- (e) Septic tanks shall be accessible by truck to within 125 feet of the nearest road or driveway.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1010.06 Septic Tank Load Conditions.

- (a) The entire septic tank shall be designed for the expected maximum load condition.
- (b) The top or cover of the tank shall be reinforced if made of concrete, as follows:
 - (1) For normal locations in grass areas, where the tank will not be subject to heavy loads from vehicles and the like, the top or cover shall be at least 3 inches thick and reinforced with No. 6 gauge wire mesh, 4 inches on center in both directions; and
 - (2) For locations where vehicles or construction equipment such as tractors or bulldozers might travel over the septic tank, the tank shall meet AASHTO H-20 specifications, as published in the AASHTO LRFD Bridge Design Specifications, 4th edition, or better.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1010.07 Inlet and Outlet Baffles.

- (a) Each septic tank shall have an inlet baffle and an outlet baffle.
- (b) The outlet baffle shall be a vented tee that extends to a distance below the surface of the liquid equal to 40% of the liquid depth.
- (c) The outlet baffle and inlet baffle shall extend above the liquid line to not less than one inch from the top of the tank.
- (d) The inlet baffle shall:
 - (1) Divert the incoming sewage downward; and
 - (2) Penetrate at least 6 inches below the liquid level, but in no case greater than the depth of the outlet baffle.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

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Env-Wq 1010.08 Sealing of Pipes. Pipes leading to and exiting from septic tanks shall be sealed with non-shrink mortar, thick plastic cement, or other sealant having the same or better durability and sealing capability.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1010.09 Storage Above Liquid Level. For a septic tank having straight, vertical sides, the distance between the top of the tank and the liquid line shall be equal to approximately 20% of the liquid depth.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1010.10 Liquid Depth. The liquid depth shall not exceed 5 feet for septic tanks of less than 3,000 gallon capacity and shall not exceed 6 feet for larger tanks. Deeper tanks may be used, but the available volume shall be calculated on the basis of the liquid depth established by this rule.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1010.11 Compartments.

(a) Tanks may be separated into 2 compartments, provided that the first compartment equals at least 2/3 of the required volume.

(b) If a tank has more than one compartment, the following shall apply:

- (1) An access manhole shall be provided to each compartment in accordance with Env-Wq 1010.05;
- (2) Venting between compartments shall be provided to allow free passage of gas;
- (3) Inlet and outlet baffles shall be proportioned as for a single tank; and
- (4) The same allowance shall be made for storage above the liquid line as in a single tank.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1010.12 Multiple Tanks. Where large septic tanks are needed, 2 tanks may be used in series, provided that the first tank is at least 2/3 the required volume.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1010.13 Shallow Septic Tanks.

(a) A septic tank less than 6 feet deep shall be used only on a ledge lot as defined in Env-Wq 1002.48.

(b) To ensure adequate settling of solids when a septic tank less than 6 feet deep is used, total tank volume shall:

- (1) Be twice the septic tank capacity specified in Env-Wq 1010.01 or Env-Wq 1010.02, as applicable; and

- (2) Be achieved using 2 or more tanks in series.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1010.14 Replacement of Septic Tanks.

(a) A septic tank may be replaced with one or more tanks of the same size or larger, in the same location, without department approval.

(b) Any septic tank(s) replaced as part of a repair or replacement under Env-Wq 1003.10 shall be shown on the sketch required by Env-Wq 1003.10(i).

(c) If the ISDS is state-approved, then amended plans shall be submitted as specified in Env-Wq 1003.14 whenever a septic tank is added or replaced with a compartmentalized septic tank to accommodate a set of basement bathroom fixtures as specified in Env-Wq 1010.01(g).

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1011 AERATION TANKS

Env-Wq 1011.01 Use of Aeration Tanks. If an aeration tank is used as a substitute for a septic tank, an EDA designed in accordance with these rules shall be used to dispose of the effluent.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1011.02 Service Contract. The department shall not give operational approval for an ISDS having one or more aeration tanks unless the applicant provides a copy of an executed service contract for the continued maintenance of the aeration tank(s) by a qualified service technician.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1012 GREASE TRAPS AND FLOOR DRAINS

Env-Wq 1012.01 Grease Traps Required. A grease trap shall be used in the ISDS serving:

- (a) Any commercial facility in which any food handling and preparation occurs; and
- (b) Any dwelling where food handling and preparation is undertaken for any business purpose.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1012.02 Grease Trap Size. The grease trap size shall be based on a minimum hydraulic detention time of 36 hours and minimum tank size of 1,000 gallons. The outlet shall be protected with a baffle that extends downward and terminates 6 inches from the inside bottom of the grease trap.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1012.03 Floor Drains. Floor drains shall not be used unless approved pursuant to Env-Ws 1500 or Env-Wq 402.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1013 SEWAGE PUMPS AND SIPHONS

Env-Wq 1013.01 Pump Alarms.

(a) Each sewage pump shall have a visual or audible alarm, or both, that signals if the pump fails for any reason.

(b) The alarm shall signal in a centrally-located area that is used daily.

(c) The pump(s) and the alarm system(s) shall be on separate electronic circuits.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1013.02 Pump Chamber.

(a) The pump chamber shall be water-tight and vented.

(b) Venting shall be done directly or through the tank.

(c) The capacity of the pump chamber shall be such that the pump or siphon can be set to dose each field a minimum of 3 times per day.

(d) If duplicate pumps are not provided, the dosing chamber shall be equipped with a high water alarm that signals in a centrally-located area at the building served if the pump fails for any reason.

(e) Each pump chamber shall be accessible via a riser.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1013.03 Siphons. The use of a single siphon shall be an acceptable method for dosing of sewage effluent. Double alternating siphons shall not be allowed.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1014 EFFLUENT DISPOSAL AREAS - GENERAL SITING REQUIREMENTS

Env-Wq 1014.01 Receiving Layer.

(a) The receiving layer for an effluent disposal area shall meet the following criteria before a site is considered suitable for system design and approval, either as is or with modifications if needed:

(1) If the proposed EDA is within 75 feet of a wetland boundary, then areas delineated as wetlands shall be further classified as having poorly drained or very poorly drained soils, in accordance with Env-Wq 1002.63, Env-Wq 1002.92, and Env-Wq 1014.03;

(2) No EDA shall be sited within 75 feet of wetlands that have very poorly drained soils, determined in accordance with Env-Wq 1002.92 and Env-Wq 1014.03;

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- (3) No EDA shall be sited within 50 feet of poorly drained jurisdictional wetlands, determined in accordance with Env-Wq 1002.63 and Env-Wq 1014.03;
 - (4) There shall be at least 2 feet of permeable soil above any impermeable subsoil;
 - (5) There shall be at least 3 feet of soil above bedrock; and
 - (6) The receiving layer as specified in (4) and (5), above, shall be under and a minimum of 35 feet down-gradient of the proposed EDA, but no less than the distance required by Env-Wq 1008.05, Table 1008-03 for any side and down-gradient fill extension.
- (b) The 2 feet of permeable soil above any impermeable subsoil required by (a)(4), above, may be created by placing fill onto the subsoil, subject to the following conditions:
- (1) The fill shall meet the criteria of (d), below; and
 - (2) Any state or local permits necessary to place the fill shall be obtained.
- (c) The 3 feet of soil above bedrock required by (a)(5), above, for the down-gradient receiving layer may be created by placing fill onto the subsoil, subject to the following conditions:
- (1) There shall be an average of 18 inches of natural soil above the bedrock;
 - (2) The fill shall meet the criteria of (d), below;
 - (3) Any state or local permits necessary to place the fill shall be obtained; and
 - (4) Fill shall be placed prior to the department issuing subdivision approval.
- (d) Fill used to create a receiving layer in accordance with this section shall:
- (1) Contain no tree stumps, sawdust, wood chips, tree bark, bricks, asphalt, concrete, metal, wallboard, construction debris, or other such non-soil materials;
 - (2) Contain no more than 25% by volume of cobbles larger than 6 inches in diameter or stones larger than 12 inches in diameter;
 - (3) Have a percolation rate of not greater than 15 minutes per inch after placement and compaction; and
 - (4) Be homogeneous, and if bedding planes or other discontinuities are present, the applicant shall submit detailed soil analysis from a person or laboratory qualified to perform the analysis with the application to establish that the fill meets the above criteria.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1014.02 Basis for Poorly and Very Poorly Drained Soils.

- (a) The purpose of the criteria for poorly drained soils is to identify soil conditions where ground water is present within the upper part of the soil surface during the growing season.

(b) The purpose of the criteria for very poorly drained soils is to identify soil conditions where water is present at or above the soil surface during the growing season such that a significant organic surface layer accumulates.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1014.03 Delineation of Wetlands; Hydric Soils Determinations.

(a) Wetlands shall be delineated on the basis of hydrophytic vegetation, hydric soils, and wetlands hydrology in accordance with the techniques outlined in the "Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1", January 1987. The hydric soil component shall be determined by using the "Field Indicators for Identifying Hydric Soils in New England, Version 3", April 2004.

(b) For sites in an undisturbed natural state, the presence or absence of hydric soils shall be determined by evaluating shovel or auger holes to a depth of 2 feet. A sufficient number of holes shall be dug to establish the hydric soil boundary to within 5 feet.

(c) The suitability of a site as a receiving layer shall be determined in accordance with (d), below, if any of the following apply:

(1) No fill has been placed on the site, but the natural vegetation and soil have been disturbed to the extent that it is not possible to determine the presence or absence of hydric soils based on a visual examination of the soil horizons revealed by shovel or auger holes; or

(2) Fill has been placed on the site prior to 1967 for tidal areas, or prior to 1969 for freshwater areas, or pursuant to authorization of the New Hampshire water resources board prior to 1979, or pursuant to a valid permit from the New Hampshire wetlands board issued prior to August 9, 1996, or issued by the department pursuant to RSA 482-A, and either:

a. Visual examination of a test pit establishes that the original soil was hydric, or

b. It cannot be determined by a visual examination of a test pit whether the original soil was a hydric soil or not.

(d) If any of the conditions set forth in (c) above apply, the presence of a suitable receiving layer shall be determined based on the hydrology of the site as shown by data obtained from piezometric monitoring wells in accordance with the following:

(1) One monitoring well shall be placed in the proposed leaching area and one monitoring well shall be placed at a point between 65 and 75 feet downgradient of the proposed leaching area;

(2) Additional monitoring wells shall be installed as needed to establish the 20,000 square foot area required for subdivision applications;

(3) Water level readings shall be taken every 2 weeks;

(4) Water level readings may be taken more often at the option of the property owner;

(5) All readings taken shall be submitted quarterly, in writing, to the department;

(6) Water levels shall be monitored for a period of 2 years;

(7) Based on the recorded data, the applicant shall estimate the seasonal high water table, taking into account weather conditions such as the amount of precipitation over the period, major storm events, frosts and thaws;

(8) The applicant shall submit the estimate together with supporting data to the department;

(9) The receiving layer shall be deemed suitable if the estimated seasonal high water table is no closer than 15 inches to the existing ground surface.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1014.04 Distance Above Impermeable Substratum.

(a) Except as allowed by (b) through (d), below, or by Env-Wq 1014.06, the bottom of an EDA shall be at least 4 feet above bedrock or any other impermeable substratum.

(b) The bottom of the EDA for new systems shall be at or above the specified separation distance to bedrock or any other impermeable substratum for any EDA using EDA components that have been approved with reference to a manual pursuant to former Env-Ws 1024 or approved pursuant to Env-Wq 1024, where the approved manual or approval, respectively, specifies that the component can be used with other than a 4-foot separation.

(c) For a system to replace a failed system serving a single family residence or duplex where there will be no expansion, the following shall apply:

(1) The bottom of the EDA shall be as close to 4 feet above bedrock or other impermeable substratum as possible, and in no case less than 2 feet above bedrock or other impermeable substratum, if a conventional pipe-and-stone system is used to replace the failed system; and

(2) The bottom of the EDA shall be as close to the specified distance above bedrock or other impermeable substratum as possible, and in no case less than 2 feet above bedrock or other impermeable substratum, for any EDA using EDA components that have been approved with reference to a manual pursuant to former Env-Ws 1024 or approved pursuant to Env-Wq 1024, where the approved manual or approval, respectively, specifies that the components can be used with other than a 4-foot separation in new applications.

(d) A system to replace a failed system serving a condominium shall be installed in accordance with (c), above, if:

(1) The condominium meets the criteria of Env-Wq 1004.05(c);

(2) The fixtures in each condominium unit are low-flow fixtures or will be replaced within 90 days of the issuance of construction approval with low-flow fixtures; and

(3) There will be no expansion of the condominium or of the size or use of the individual units in the condominium.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1014.05 Distance Above Seasonal High Water Table.

(a) Except as allowed by (b) through (d), below, or by Env-Wq 1014.06, the bottom of an EDA shall be at least 4 feet above the seasonal high water table (SHWT).

(b) The bottom of the EDA for new systems shall be at or above the specified separation distance to SHWT for any EDA using EDA components that have been approved with reference to a manual pursuant to former Env-Ws 1024 or approved pursuant to Env-Wq 1024, where the approved manual or approval, respectively, specifies that the component can be used with other than a 4-foot separation.

(c) For a system to replace a failed system serving a single family residence or duplex where there will be no expansion, the following shall apply:

(1) The bottom of the EDA shall be as close to 4 feet above SHWT as possible, and in no case less than 2 feet above SHWT, if a conventional pipe-and-stone system is used to replace the failed system; and

(2) The bottom of the EDA shall be as close to the specified distance above SHWT as possible, and in no case less than 2 feet above SHWT, for any EDA using EDA components that have been approved with reference to a manual pursuant to former Env-Ws 1024 or approved pursuant to Env-Wq 1024, where the approved manual or approval, respectively, specifies that the component can be used with other than a 4-foot separation in new applications.

(d) A system to replace a failed system serving a condominium shall be installed in accordance with (c), above, if:

(1) The condominium meets the criteria of Env-Wq 1004.05(c);

(2) The fixtures in each condominium unit are low-flow fixtures or will be replaced within 90 days of the issuance of construction approval with low-flow fixtures; and

(3) There will be no expansion of the condominium or of the size or use of the individual units in the condominium.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1014.06 Separation Distances on Sloping Sites. A portion of a bed proposed for a sloped site may be as close as 24 inches above impermeable substratum or SHWT, provided that at least 50% of the bed area meets the requirements established by Env-Wq 1014.04 and Env-Wq 1014.05.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1014.07 Spot Elevations Required for Systems on Slopes. Where reductions are being taken pursuant to Env-Wq 1014.06, the applicant shall provide:

(a) Spot elevations of the original grade at the corners of the proposed bed; and

(b) Calculations to show that the conditions of Env-Wq 1014.06 will be met.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

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Env-Wq 1014.08 Executed Easements. The applicant shall provide copies of executed easements prior to approval if an ISDS is located on property other than that on which the building(s) served by the ISDS is/are located, unless the properties are owned by the same person.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1014.09 Water Table Less Than 15 Inches. For sites where the seasonal high water table is less than 15 inches below original grade, the ISDS design shall incorporate proposed drainage details designed to protect and maintain the receiving layer for the EDA.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1015 DISTRIBUTION BOXES

Env-Wq 1015.01 Distribution Boxes.

(a) Distribution boxes shall be required for every ISDS where there are multiple beds, trenches, or pipes, except if serial distribution or pressure distribution in accordance with Env-Wq 1019 is used.

(b) Distribution boxes shall be designed to insure equal distribution of effluent to the leach lines. The bottom of each outlet line from the distribution box shall be at the same height within the box.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1015.02 Velocity Reducing Devices. Velocity reducing devices such as an elbow or "T" shall be installed within the distribution box where the effluent line from the septic tank has a slope in excess of 10% or where effluent is being pumped from the septic tank to the distribution box.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1015.03 Multiple Beds. Where 2 or more EDA are used, a distribution box shall be set on a concrete slab to prevent settling.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1016 CONSTRUCTION REQUIREMENTS FOR ALL EDA

Env-Wq 1016.01 Bed Size for Conventional Stone and Pipe Systems. The bed size for conventional stone and pipe systems shall be determined by the number of bedrooms, percolation rates, and total sewage flow per day as set forth in Table 1016-1 below:

Table 1016-1 Bed Size for Conventional Stone and Pipe Systems
In Square Feet for Varying Loads And Percolation Rates

Percolation Rate in Minutes Per Inch	Single-Family and Duplex - Number of Bedrooms Up to 10				Commercial
	2 (300 GPD)	3 (450 GPD)	4 (600 GPD)	Each Add' Bedroom (+ 250 GPD)	Per 100 GPD
2	400	560	750	188	125

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4	425	617	825	210	140
6	450	675	900	233	155
8	500	750	1000	255	170
10	550	825	1100	278	185
12	600	900	1200	300	200
14	637	955	1275	319	213
16	675	1010	1350	338	225
18	712	1065	1425	357	237
20	750	1120	1500	375	250
22	775	1158	1550	387	258
24	800	1196	1600	400	266
26	825	1234	1650	412	274
28	850	1272	1700	425	282
30	875	1310	1750	437	290
32	900	1348	1800	449	298
34	925	1386	1850	462	306
36	950	1424	1900	475	314
38	975	1462	1950	488	322
40	1000	1500	2000	500	330
42	1050	1575	2100	525	347
44	1100	1650	2200	550	364
46	1150	1725	2300	575	381
48	1200	1800	2400	600	398
50	1250	1875	2500	625	415
52	1300	1950	2600	650	432
54	1350	2025	2700	675	449
56	1400	2100	2800	700	466
58	1450	2175	2900	725	483
60	1500	2250	3000	750	500

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1016.02 Bed Size for Chamber Systems. For purposes of complying with Env-Wq 1014.08, the following shall apply:

(a) The effective bed size for chamber systems shall be calculated as the sum of the length times the width of each chamber; and

(b) For non-commercial applications, the actual bed size shall be at least 60% of the area established in section Env-Wq 1016.01

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1016.03 Excavation. Any person excavating for an EDA shall:

(a) Protect the natural absorption qualities of the soil;

(b) Protect open excavation from storm runoff to prevent the entrance of silt and debris;

(c) Rake all smeared or compacted surfaces to a depth of one inch; and

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(d) Remove loose material before the fill or uniform crushed stone is placed or, in the case of chambers or LDGP systems, the sand bed is constructed.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1016.04 Type of Stone for Conventional Stone-and-Pipe Beds or Trenches.

(a) The pipe, laid in a bed or trench of sufficient width and depth, shall be supported by approved septic stone as specified in (b), below.

(b) Approved septic stone shall be clean, uniformly-sized washed crushed stone, washed rock, or similar aggregate, 1.5 inch, free of fines, with a range of 0.75 inches to 2.5 inches, in accordance with Table 1014-2, below.

(c) Approved septic stone shall meet the sieve size and percent passing by weight requirements in accordance with AASHTO, 27th edition, test method T011-85, which replaces AASHTO, 17th edition, test method T 11-85, and which applies to septic stone available for retail purchase, as set forth in Table 1014-2, below:

Table 1014-2 Approved Septic Stone Requirements

<u>SIEVE SIZE</u>	<u>PERCENT PASSING By Weight</u>
2 inch	100
1 inch	90 - 100
3/4 inch	0 - 20
#4	0 - 5
#200	0 - 1.5

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1016.05 Backfill of Conventional Pipe-and-Stone Beds.

(a) Before backfilling the EDA, the stone shall be covered with a permeable layer that will allow ventilation, such as untreated building paper, a 2 inch layer of hay, or filter fabric. An impervious covering such as tar paper or plastic shall not be used, as this interferes with ventilation.

(b) Backfill material shall be clean, permeable fill.

(c) After backfilling, the top of the EDA shall be overfilled with 4 to 6 inches of loam suitable for seeding.

(d) No more than 18 inches total of backfill and loam shall be used to cover the EDA.

(e) Hydraulic backfilling or machine tamping of the backfill or loam, or both, shall be prohibited.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

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Env-Wq 1016.06 Type of Sand for Chamber and LDGP Systems. Chamber and LDGP systems shall be constructed using the type of sand specified in the most current version of the manufacturer's design manual that has been approved by the department in accordance with Env-Wq 1024.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1016.07 Backfill of Chamber and LDGP Beds. Chamber and LDGP systems shall be backfilled in accordance with the most current version of the manufacturer's design manual that has been approved by the department in accordance with Env-Wq 1024. If the design manual does not specify backfill requirements, then the requirements of Env-Wq 1016.05 shall apply.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1016.08 Storm Runoff. Where sloping ground is used for construction of the EDA, a small temporary dike or surface water diversion ditch shall be constructed above the EDA to prevent the EDA from being washed out by rain. The dike shall be maintained or the ditch kept free of obstruction until the EDA becomes stabilized with vegetation.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1016.09 Vehicular Traffic. Heavy wheeled machinery and vehicles shall be excluded from the EDA unless the EDA has been specifically designed to withstand the weight. All machine grading of the site shall be completed before any components of the EDA are installed.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1017 LEACH LINES

Env-Wq 1017.01 Installation Requirements.

(a) Subject to (b), below, any type of leach line for which the manufacturer has provided a design manual shall be installed in accordance with the most current version of the design manual that has been approved by the department in accordance with Env-Wq 1024 if the design manual contains limitations that must be met in order for the ISDS installed using that leach line to meet the requirements of Env-Wq 1000.

(b) The requirements of this part shall be met for:

- (1) Leach lines for which the manufacturer has not provided a design manual; and
- (2) Leach lines for which the design manual is silent on a particular requirement.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1017.02 Concrete Chambers.

(a) Each EDA that comprises concrete chambers shall be constructed on a 6 inch level bed of:

- (1) Medium to coarse textured sand, with an effective size of 0.25 to 2.0 mm, no greater than 5% passing the number 200 sieve, and no particles larger than 3/4 inch; or
- (2) Materials meeting the ASTM C-33 specification.

(b) Filter fabric or galvanized wire mesh and septic stone shall be placed around the outside perimeter of the chamber bed.

(c) The pipe conveying effluent from the septic tank to the bed shall empty into either a velocity reducing pit, a splash plate, or internal distribution system.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1017.03 Venting for Chamber Systems.

(a) All chamber systems shall be vented.

(b) Vent pipes shall be pitched down toward the bed.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1017.04 Location Under Driveways.

(a) Chambers proposed to be located under driveways and parking areas shall meet AASHTO H-20 specifications for heavy duty chambers, as published in the AASHTO LRFD Bridge Design Specifications, 4th edition.

(b) Other types of leach lines shall not be used under driveways and parking areas unless the most current version of the manufacturer's design manual that has been approved by the department in accordance with Env-Wq 1024 allows such use.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1017.05 Requirements for All Leach Lines.

(a) Supply lines from the distribution box to the leach lines shall be solid pipe.

(b) Tight connectors shall be used between the leach lines and the pipes shall be laid as level as possible.

(c) The maximum length of a leach line shall be 100 feet.

(d) Each leach line shall come directly from a separate outlet of the distribution box.

(e) The leach lines shall be sealed into the distribution box with non-shrink mortar, thick plastic cement, or other sealants which can be shown by submission of manufacturer's literature with the application to be shrink-proof, water proof and will not deteriorate over time.

(f) All leach lines shall be either interconnected or capped at the far end of the system.

(g) Leach lines and the bottom of the EDA shall be as level as possible.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1017.06 Conventional Pipe-and-Stone System Leach Lines. For a conventional stone-and-pipe system, the following shall apply:

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- (a) Leach lines shall be 4 inch perforated rigid pipe.
- (b) The holes in the leach lines shall be positioned at the 5 and 7 o'clock positions.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1018 BEDS AND TRENCHES

Env-Wq 1018.01 Construction of Beds.

- (a) The bed for a concrete chamber shall be as specified in Env-Wq 1017.02(a).
- (b) For a conventional stone-and-pipe system, the following shall apply:
 - (1) The bed shall consist of a minimum of 12 inches of stone total, with a minimum of 6 inches of stone under the leach lines and a minimum of 2 inches of stone over the leach lines; and
 - (2) The leach lines shall be laid a maximum of 5 feet on center with 2.5 feet of septic stone from the pipes to the outside of the bed.
- (c) The bed for a chamber or LDGP system shall be as specified in the most recent manufacturer's design manual approved by the department.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1018.02 Trench Orientation.

- (a) Trenches shall be parallel to the contours of the land.
- (b) All trenches shall be of equal length unless serial distribution is used.
- (c) The bottom of the trench shall not be more than 5 feet below final grade.
- (d) Unless serial distribution is used, the first length of all distribution lines leading from the distribution boxes to the trenches shall be laid with the same pitch.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1018.03 Width and Spacing of Trenches.

- (a) Subject to (b), below, trenches shall be separated by at least 2 feet of undisturbed soil or fill meeting the requirements specified in Env-Wq 1021.03(b).
- (b) Any trench of 48 to 60 inches in width which is greater than 3 feet below original grade shall be separated a minimum of 3 times the width.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1018.04 Construction of Trenches Near Trees. Trenches constructed within 10 feet of large trees or dense shrubbery shall have at least 12 inches of uniform crushed stone beneath the leach pipe.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1018.05 Size of Effluent Disposal Area for Trench Systems.

(a) Sidewall surfaces in trench systems shall be used in calculating the EDA only if the septic tank outlet is at a higher elevation than the top of the EDA.

(b) The effective EDA for trenches shall be calculated as twice the effective sidewall surface added to the width, multiplied by the length. This total shall be multiplied by the number of trenches. The formula can also be stated as follows: $\text{length} \times (\text{width} + (\text{depth} \times 2)) \times \text{number of trenches}$.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1019 PRESSURE DISTRIBUTION

Env-Wq 1019.01 Pressurized Distribution System.

(a) An ISDS using pressurized distribution shall distribute effluent from a septic tank using small diameter pipe, with perforations, pressurized by pumps or siphons, such that the volume of water that flows out each hole is as equal as possible.

(b) A pressurized distribution system shall lose 75 to 85 percent of the head in the network when the water passes through the holes.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1019.02 Design Requirements.

(a) Hole size shall be within the range of 1/4 inch to 5/8 inch.

(b) Maximum allowable hole spacing shall be 6 feet.

(c) The perforation at the end of the leach line shall be drilled horizontally in the end cap near the crown of the pipe to facilitate venting.

(d) In ISDS with pressure distribution, the lateral spacing of the pipes shall be approximately equal to the perforation spacing, and holes on adjacent laterals shall be staggered so that they lie on the vertices of equilateral triangles.

(e) The dosing volume for pressure distribution shall be 5 to 10 times the network pipe volume. If duplicate pumps are not provided, the dosing chamber shall have a reserve capacity above the active dosing volume equal to one day's average flow.

(f) The loading rate shall be 0.8 gallons per day per square foot.

(g) The dose rate shall be 0.2 gallons per dose per square foot.

(h) Basal area requirements shall be based upon the percolation rate as presently applied to conventional systems.

(i) Fill material shall be:

(1) A medium to coarse textured sand, with an effective size of 0.25 to 2.0 mm., no greater than 5% passing the number 200 sieve, and no particles larger than 3/4 inch; or

(2) Materials meeting the ASTM C-33 specification.

(j) The separation distances with respect to seasonal high water table, impermeable substratum, and ledge shall be as set forth in Env-Wq 1014.04 and Env-Wq 1014.05.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1019.03 Mounding Minimization. The length-to-width ratio for bed areas shall be increased in order to minimize groundwater mounding potential, increase oxygen transfer levels, and increase down-slope cross-sectional area.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1019.04 Application Requirements. The following shall appear on or with all plans and specifications for pressure distribution systems submitted for review:

- (a) All calculations as indicated on a pressure distribution worksheet in the appendix to Env-Wq 1000;
- (b) All details for network layout;
- (c) Pump/pump station or siphon details;
- (d) Network drainage to avoid freezing potential;
- (e) All construction methods for basal area preparation; and
- (f) Inspection/construction requirements as follows:
 - (1) "Basal area preparation to be inspected by system designer prior to fill placement. An inspection report shall be submitted to the regional inspector at the time of final inspection."
 - (2) "Caution to be exercised during fill placement/site preparation to avoid compaction or smearing of infiltrative surface."
 - (3) "Maintain 8-12 inches of fill between equipment tracks and prepared surface."

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1019.05 Construction Requirements.

(a) The permitted designer shall inspect the basal area preparation prior to fill placement, and shall submit an inspection report to the department's regional inspector at the time of final inspection.

(b) Compaction and smearing of infiltrative surface shall be avoided during fill placement and site preparation.

(c) The installer shall maintain 8 to 12 inches of fill between equipment tracks and the prepared surface.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1020 DRY WELLS

Env-Wq 1020.01 Masonry Units.

(a) If precast masonry units are used for dry wells, the portion of the dry well above the inlet pipe shall be laid with mortared joints or otherwise strengthened.

(b) Hard-burned brick, heavy-weight concrete block, structural clay tile, and fieldstone shall be acceptable if properly laid to provide necessary structural strength.

(c) If cement blocks are used, the blocks shall be laid such that the holes run vertically.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1020.02 Stone.

(a) A perimeter of 6 inches to 2-1/2 feet of septic stone shall be placed around the masonry work or precast unit.

(b) The horizontal distance of septic stone used shall not be more than 1/2 the inside diameter, or narrowest inside dimension of the masonry work or precast unit.

(c) A minimum of 12 inches of septic stone shall be placed under the unit.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1020.03 Distance Between Dry Wells. Multiple dry wells installed as part of the same ISDS shall be separated by at least 10 feet.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1020.04 Sizing of Effluent Disposal Area.

(a) For purposes of complying with Env-Wq 1014.08, the effective effluent disposal area for dry wells shall be the vertical wall area, based on the dug diameter, below the inlet, excluding the surface area of the bottom of the drywell.

(b) The total area provided shall be at least 50% of the area established in Env-Wq 1014.08.

(c) The area shall be calculated to the edge of stone using one of the following formulas:

(1) $A = \pi dh$, where d is the diameter of the dry well and h is the height below inlet; or

(2) $A = 2h(l+w)N$, where h is the height of the dry well, l is the length of the dry well, w is the width of the dry well, and N is the total number of drywells.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

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Env-Wq 1020.05 Abandoned Dry Wells. Abandoned wastewater dry wells shall be filled in with earth or stone.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1020.06 Precast Units. If precast units are used, they shall:

- (a) Have at least one inlet and one inspection cover; and
- (b) Be round or polygonal in cross-sectional shape.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1021 RAISED EFFLUENT DISPOSAL AREAS

Env-Wq 1021.01 Building Foundation. The foundation of a building served by a raised EDA shall be constructed high enough to allow gravity feed to the system, unless a pump is used.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1021.02 Site Preparation. After the plans for a system having a raised EDA have been approved, the EDA shall be staked out in accordance with the plans. All trees, topsoil, roots that are directly attached to a tree stem which can be extracted with the stump, and organic soil material shall be removed from the area to be filled, including the area under the side slopes.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1021.03 Fill Material.

(a) Subject to (b), below, fill required to raise the EDA to the approved distance above the seasonal high ground water table or impervious substratum shall be clean bank run sand, free of topsoil or humus, dredgings, or stones more than 6 inches in any dimension.

(b) The first 6 inches directly beneath the bed and extending laterally across the fill extension shall consist of:

- (1) Medium to coarse textured sand, with an effective size of 0.25 to 2.0 mm, no greater than 5% passing the number 200 sieve, and no particle size larger than 3/4 inch; or
- (2) Materials meeting the ASTM C-33 specification.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1021.04 Fill Extension; Side Slopes.

(a) The finished grade over the bed shall:

- (1) Extend for a minimum of 5 feet horizontally beyond the bed before starting to slope; and
- (2) Be covered by 4 to 6 inches of loam suitable for seeding.

- (b) The sides of the raised EDA shall taper at a 3:1 slope.
- (c) The side slopes shall be stabilized by being covered with:
 - (1) At least 3 inches of loam that is seeded immediately;
 - (2) At least 3 inches of bark mulch; or
 - (3) Other material that will prevent erosion and lead to long-term stability of the slopes without interfering with ventilation, such as an erosion control blanket.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1021.05 Slope of Site for Raised EDA. A raised EDA shall not be placed on a site having a natural slope greater than 34%.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1021.06 Retaining Walls Prohibited. Retaining walls or foundations used as retaining walls shall not be allowed to substitute for the side slopes.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1022 ALTERNATE SYSTEMS

Env-Wq 1022.01 Privies.

- (a) No privy shall be located within 75 feet of drinking water wells, surface waters, or foundations on abutting lots.
- (b) Subject to (c), below, the bottom of the privy pit shall be at least 4 feet above seasonal high water table and impermeable substratum or ledge.
- (c) If the bottom of the privy pit is less than 4 feet above the seasonal high water table or impermeable substratum or ledge, the pit shall be sealed.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1022.02 Mini-Dry Wells for Gray Water.

- (a) A mini-dry well shall be used for the disposal of gray water only if there will be no running water to, or other wastewater discharge from, the structure to be served.
- (b) No mini-dry well for gray water shall be within 75 feet of drinking water wells or surface waters.
- (c) A mini-dry well for gray water shall be a hole up to 18 inches in diameter and 12 inches deep, filled with stone or gravel.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1022.03 Holding Tanks.

(a) Holding tanks or closed systems shall not be approved except in the following instances:

- (1) As a replacement for an existing system in failure when no other means of disposal is practical; or
- (2) When the structure proposed to be served by the holding tank will be connected to a municipal sewer within one year of approval of the holding tank application.

(b) Holding tanks shall be water-tight and provided with an alarm system to indicate when the tank is full and requires pumping.

(c) Any person applying for a holding tank approval shall submit with the application a copy of the signed contract with a licensed septage hauler which identifies at least one approved disposal site to which the septage will be hauled.

(d) The owner of the property on which a holding tank has been installed shall retain all receipts for pumping services and shall submit copies of said receipts to the local health officer on a quarterly basis. Past receipts shall be retained for a period of 2 years.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1022.04 Disposal of Residential Water Treatment Backwash.

(a) Residential water treatment backwash shall be discharged only to:

- (1) An ISDS that is sized to accommodate the volume of backwash generated; or
- (2) An alternative disposal system as specified in (b) and (c), below.

(b) An alternative disposal system for residential water treatment backwash shall:

- (1) Infiltrate on the property served by the water treatment system;
- (2) Not cause soil erosion, siltation, or overland run-off;
- (3) Not discharge to any surface water or wetland;
- (4) Accept residential water treatment backwash only;
- (5) Be located so as to minimize any influence on water supply wells and ISDS on the property served or on adjacent properties; and
- (6) Not cause any violation of the ambient groundwater quality standards as specified in Env-Or 603 on adjacent properties.

(c) An alternative disposal system such as a mini-dry well, small leaching pit, or trench with perforated pipe shall be used only if it meets the parameters specified in (b), above.

(d) An alternative disposal system meeting the parameters specified in (b), above, shall not require approval from the department.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1023 OPERATING REQUIREMENTS

Env-Wq 1023.01 Septic Tank Inspection and Pumping Requirements.

(a) Septic tanks shall be inspected for accumulation of sludge and surface scum at a frequency sufficient to allow the tank to be pumped by a licensed septage hauler when the combined thickness of the sludge and surface scum equal 1/3 or more of the tank depth.

(b) Septage and effluent shall be discharged from a septic tank only to:

- (1) An approved or grandfathered effluent disposal area; or
- (2) A licensed septage hauling vehicle.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1023.02 Disposal of Grease and Bulky Waste. To prevent obstruction of the distribution lines and leach lines, grease and bulky wastes shall not be flushed or otherwise introduced into an ISDS.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1023.03 Disposal of Toxic and Hazardous Materials. Toxic and hazardous materials shall not be flushed or otherwise introduced into an ISDS.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1023.04 Protection of Distribution Lines and Effluent Disposal Area. To prevent damage to the distribution lines and effluent disposal area, vehicles, livestock and other heavy objects shall not be allowed on the effluent disposal area.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1023.05 Indications of Possible Septic System Failure Requiring Inspection. If wet areas appear on the ground surface above the septic tank, distribution lines, or effluent disposal area, or if disagreeable odors occur, the owner of the ISDS shall:

- (a) Inspect the system or have the system inspected by a permitted designer or permitted installer to determine the source of the problem(s); and
- (b) Take action to correct the problem(s).

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1024 INNOVATIVE/ALTERNATIVE TECHNOLOGY

Env-Wq 1024.01 Purpose and Scope.

(a) The purpose of this part is to provide the methodology and review process for the approval of:

- (1) Innovative/alternative technology proposed for use in ISDS, in compliance with RSA 485-A:29, I; and

(2) Updated design manual(s) for technology that originally was approved with reference to a manual under former Env-Ws 1024 and for which installation in accordance with the manual is required in order for the technology to be used in New Hampshire.

(b) This part shall apply to:

(1) Any proposed ISDS technology not described elsewhere in Env-Wq 1000; and

(2) Technology that was approved with reference to a manual under former Env-Ws 1024, whether or not the technology is described elsewhere in Env-Wq 1000, if installation in accordance with the manual is required in order for the technology to be used in New Hampshire.

(c) No approval granted under this part shall be deemed to affect any approval of property subdivision, nor shall any property subdivision considered under this chapter be granted contingent on the use of any technology approved under this part.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1024.02 Definitions.

(a) “Conventional technology” means a conventional pipe-and-stone system, as defined in Env-Wq 1002.16, installed in accordance with the applicable provisions of Env-Wq 1000.

(b) “Director” means the director of the department’s division of water.

(c) “Innovative/Alternative waste treatment” as defined in RSA 485-A:2, XXI, includes ISDS that incorporate technology approved pursuant to this part.

(d) “ITA applicant” means the person seeking approval of proposed technology or an updated manual in accordance with this part.

(e) “Innovative/alternative technology approval (ITA)” means an approval issued by the department pursuant to Env-Wq 1024.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1024.03 Use, Repair, and Replacement of Innovative/Alternative Technology.

(a) No innovative/alternative technology shall be used in an ISDS unless the technology has been evaluated and approved in accordance with this part.

(b) If the manufacturer’s specifications or the operational manual for the proposed innovative/alternative technology states that the technology requires ongoing professional maintenance to operate properly, the owner of a proposed ISDS which incorporates that technology shall execute a service contract for such maintenance before operational approval is granted.

(c) If an ISDS that was constructed using technology approved under this part fails for reasons related to the innovative/alternative technology, the ISDS shall not be replaced with the same technology unless the source of the failure is specifically identified and corrected.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1024.04 Types of ITA.

- (a) The ITA issued by the department shall be provisional, general, or general with conditions.
- (b) The ITA applicant shall submit an application for a provisional ITA in accordance with Env-Wq 1024.05 if:
 - (1) The proposed technology has not previously been approved by the department; or
 - (2) The technology was approved with reference to a manual under Env-Ws 1024, but the ITA applicant seeks approval to use or install the technology in one or more ways not previously approved, for instance with a smaller separation distance to the seasonal high water table.
- (c) A provisional ITA shall:
 - (1) Allow up to 50 ISDS to be installed using the approved technology over a time period of up to 5 years;
 - (2) Require the ITA applicant to conduct performance testing in accordance with Env-Wq 1024.11 during the approval period stated in the provisional ITA; and
 - (3) Require the ITA applicant to report the results of the testing conducted pursuant to (2), above to the department in writing.
- (d) An ITA applicant shall submit an application for a general ITA or general ITA with conditions in accordance with Env-Wq 1024.07 if:
 - (1) The ITA applicant has complied with all terms and conditions of a provisional ITA issued pursuant to this part; and
 - (2) The performance testing conducted pursuant to (c)(2), above, demonstrates that there is sufficient operating history, or other valid data, to allow general use of the technology, either with or without conditions.
- (e) A general ITA shall allow the approved technology to be used in accordance with the standards specified in Env-Wq 1000 for conventional systems, subject to any bed size reductions allowed by the approval.
- (f) A general ITA with conditions shall allow the approved technology to be used subject to the conditions specified in the ITA, including but not limited to conditions such as:
 - (1) Requiring compliance with specific operation and maintenance (O&M) provisions;
 - (2) Requiring compliance with specific installation requirements;
 - (3) Requiring the technology to be installed in accordance with a design manual supplied by the manufacturer if such manual contains conditions, limitations, or installation requirements that must be met in order for the technology to meet the approval criteria; and
 - (4) Other conditions, limitations, or restrictions as are necessary to ensure or verify that the technology as installed in the field meets the criteria specified in Env-Wq 1024.08(c).

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1024.05 Applications for Provisional ITA.

(a) To obtain a provisional ITA, the ITA applicant shall submit a written application that includes the following:

- (1) If the ITA applicant is an individual, the individual's name, mailing address, daytime telephone number, and, if available, an e-mail address;
- (2) If the ITA applicant is other than an individual, the name and mailing address of the ITA applicant and the name and daytime telephone number, and, if available, an e-mail address, for an individual who can be contacted on behalf of the ITA applicant regarding the application;
- (3) A narrative description of the proposed technology, together with any diagrams or schematics that are helpful to understanding the proposed technology;
- (4) If the ITA applicant believes that installation in accordance with a manufacturer's design manual is required for the proposed technology to meet the criteria specified in Env-Wq 1024.08(c), a copy of the design manual;
- (5) Whether approval is sought for use of the proposed technology in residential ISDS, commercial ISDS, or both;
- (6) All operational reports, patent information, technical reports, and laboratory reports published on the proposed technology, even if the information might in whole or in part reflect negatively on the technology;
- (7) A description of any advantages of the proposed technology over conventional technology in the prevention of health hazards, surface and groundwater pollution, and any other environmental benefits;
- (8) A description of the possible risks to public health, surface or ground waters, or other aspects of the environment of using the proposed technology;
- (9) A list of the states or provinces that have approved the technology, and for each such state or province:
 - a. The name, mailing address, and main telephone number of the specific agency that issued the approval;
 - b. The name and daytime telephone number and, if available, an e-mail address, of an official at the state or provincial agency which issued the approval who can be contacted regarding the approval; and
 - c. A statement of whether the approval contains any restrictions, limitations, or other conditions on the use of the technology;
- (10) The names, addresses, and phone numbers of at least 3 individuals who have experience in the design and operation of the same type of technology, if available;
- (11) The effect of the proposed technology on the area of land required for operation;
- (12) A list of any rules under Env-Wq 1000 for which waivers will be requested as part of the ITA; and

(13) A list of site locations where the technology has been used, if available, whether successfully or not.

(b) If information addressing more than one category of (a)(3) through (13), above, is found within the same document, the ITA applicant shall identify on a separate sheet of paper which categories are covered in that document, listed by page number.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1024.06 Review of Applications for Provisional ITA.

(a) The department shall review an application submitted pursuant to Env-Wq 1024.05 within the time periods specified in RSA 541-A:29.

(b) Subject to (c), below, the department shall issue a provisional ITA for the proposed technology if, based on its evaluation of the available information, it makes its best engineering judgment that:

(1) The proposed technology is likely to be at least as protective of the environment as conventional technology, as that criterion is explained in Env-Wq 1024.10(a); and

(2) The proposed technology is likely to function as reliably or better than conventional technology, as that criterion is explained in Env-Wq 1024.10(b).

(c) If the information available to the department is sufficient to allow the commissioner, based on a recommendation of the director, to determine that a general ITA or general ITA with conditions should be issued in lieu of a provisional ITA because the ITA applicant has demonstrated that the proposed technology meets the criteria of Env-Wq 1024.08(b) or (c), as applicable, the department shall issue the recommended ITA in lieu of a provisional ITA.

(d) If the department approves the application for a provisional ITA, it shall:

(1) Notify the ITA applicant in writing signed by the director of the issuance of the provisional ITA and of the requirements to conduct and report on performance testing; and

(2) Post on its web site a notice that the provisional ITA has been issued.

(e) If a decision is made pursuant to (c), above, to issue a general ITA or general ITA with conditions, the department shall issue the notice in accordance with Env-Wq 1024.08(d).

(f) If, based on its evaluation, the department determines that the ITA applicant has not demonstrated that the technology will meet the criteria specified in (b), above, the department shall notify the ITA applicant, in writing, of the denial and the specific reason(s) for the decision.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1024.07 Applications for General ITA or General ITA with Conditions.

(a) To apply for a general ITA or general ITA with conditions, the ITA applicant shall submit the following in writing to the department:

(1) All of the information specified in Env-Wq 1024.05 for a provisional ITA application;

(2) A clear and concise summary of the results of the performance testing conducted pursuant to the provisional ITA; and

(3) If the application is for a general ITA with conditions, a list of the conditions the ITA applicant is asking to have in the approval, which may include a manufacturer's design manual.

(b) If information addressing more than one category of Env-Wq 1024.05(a)(3) through (13) is found within the same document, the ITA applicant shall identify on a separate sheet of paper which categories are covered in that document, listed by page number.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1024.08 Review of Applications for General ITA and General ITA with Conditions.

(a) The department shall review an application submitted pursuant to Env-Wq 1024.07 within the time periods specified in RSA 541-A:29.

(b) The department shall issue a general ITA for the proposed technology if, based on its evaluation of the available information, it makes its best engineering judgment that the proposed technology will, without special O&M requirements or other conditions, limitations, or restrictions:

(1) Be at least as protective of the environment as conventional technology, as that criterion is explained in Env-Wq 1024.10(a); and

(2) Function as reliably or better than conventional technology, as that criterion is explained in Env-Wq 1024.10(b).

(c) The department shall issue a general ITA with conditions for the proposed technology if, based on its evaluation of the available information, it makes its best engineering judgment that the proposed technology will, with the specified O&M requirements or other conditions, limitations, or restrictions:

(1) Be at least as protective of the environment as conventional technology, as that criterion is explained in Env-Wq 1024.10(a); and

(2) Function as reliably or better than conventional technology, as that criterion is explained in Env-Wq 1024.10(b).

(d) If the department approves the application, it shall:

(1) Notify the ITA applicant in writing signed by the director of the issuance of the approval;

(2) Include in the notice a statement of whether the approval is a general ITA or general ITA with conditions, and if a general ITA with conditions, the specific conditions that apply; and

(2) Post on its web site a notice that the ITA has been issued.

(e) If, based on its evaluation, the department determines that the ITA applicant has not demonstrated that the proposed technology will meet the criteria specified in (b) or (c), above, the department shall:

(1) Issue a provisional ITA and notify the applicant in accordance with Env-Wq 1024.06(c), if the criteria for a provisional ITA specified in Env-Wq 1024.06(b) have been met; or

- (2) Deny the application and notify the ITA applicant, in writing, of the denial and the specific reason(s) for the decision if the criteria for a provisional ITA specified in Env-Wq 1024.06(b) also have not been met.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1024.09 Effect of an ITA.

- (a) Once granted, a provisional ITA shall constitute evidence that the department has determined, based on the information reviewed, that the technology is likely to be acceptable but that evaluation of performance testing under actual operating conditions is required before a final determination can be made.
- (b) Once granted, a general ITA or general ITA with conditions shall constitute evidence that:
 - (1) The department has determined, based on the materials submitted with the application, that the technology as approved is expected to be capable of adequately treating sewage provided that any O&M requirements or other conditions, limitations, or restrictions noted are adhered to; and
 - (2) The technology is approved for purposes of applying for site-specific construction approvals under Env-Wq 1003 and Env-Wq 1004.
- (c) An ITA shall not be construed as evidence of suitability of the technology for any particular lot.
- (d) Obtaining an ITA shall not abrogate the necessity of obtaining both a design approval and operational approval before using the technology in a proposed ISDS.
- (e) The applicant shall furnish a copy of the ITA when applying for approvals under Env-Wq 1003 and Env-Wq 1004.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1024.10 Evaluation Criteria.

- (a) The criterion “at least as protective of the environment as a conventional system” means that the effluent quality from the proposed technology will be as good or better than the effluent quality from conventional technology for at least the following parameters:
 - (1) Five-day biochemical oxygen demand (BOD₅);
 - (2) Total suspended solids (TSS);
 - (3) Nitrogen;
 - (4) Phosphorus; and
 - (5) Fecal coliform.
- (b) The criterion “function as reliably or better than a conventional system” means that the proposed technology, as compared to conventional technology, has a:
 - (1) Decreased susceptibility to failure, as defined in Env-Wq 1002.30;
 - (2) Reduced occurrence of inadequately treated discharges; and

(3) Decreased levels of required operator attention and skills.

(c) When evaluating an applicant's design manual, the department shall review the material in the manual to ensure that a system built following the design manual will meet the criteria specified in Env-Wq 1024.08(c).

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1024.11 Performance Testing.

(a) Performance testing required pursuant to Env-Wq 1024.04(c)(2) shall be designed such that:

(1) The amount and quality of data available on the proposed technology becomes sufficient to support claims of performance and operational reliability:

- a. In conditions of weather and terrain that reasonably can be expected in the state; and
- b. Over a period of time such that the expected useful life of an ISDS using the technology can be estimated to be comparable to the expected useful life of conventional technology;

(2) The complexity of the proposed technology does not interfere with the application of standard engineering judgment to evaluate claims of performance and operational reliability;

(3) If the proposed technology could fail in ways that would be difficult to detect in the field by visual or olfactory observation, alternative methods to detect failure are developed that can be implemented in actual installations; and

(4) The consequences of failure of the proposed technology can be compared to the consequences of failure of conventional technology.

(b) Prior to undertaking performance testing, the ITA applicant shall submit a proposed testing protocol to the department in writing.

(c) The department shall approve the proposed testing protocol if:

(1) The testing will be performed on an ISDS installed in accordance with the manufacturer's design manual, if the ITA applicant has specified that such installation is believed to be required in order for the proposed technology to meet the criteria specified in Env-Wq 1024.06(b);

(2) The test ISDS will be installed in New Hampshire or in conditions of weather and terrain that reasonably can be expected in the state;

(3) Effluent loading and quality will replicate effluent loading and quality typically found in the type of installation for which approval is sought, such as residential or commercial;

(4) Groundwater sampling will be performed at least monthly, in locations that allow for evaluation of groundwater quality around, under, and at least 75 feet down-gradient of the test ISDS; and

(5) The department will receive split samples of a representative number of groundwater samples, determined based on the number of sampling locations and frequency of sampling.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1024.12 Updated Design Manuals.

(a) Approval of an updated manufacturer's design manual shall be sought pursuant to this section only if:

- (1) The technology covered by the design manual originally was approved with reference to a manual under former Env-Ws 1024 or has received a general ITA with conditions under Env-Wq 1024;
- (2) Installation in accordance with the manual is required in order for the technology to be used in New Hampshire; and
- (3) The changes to the manual do not affect the use or installation of the technology in one or more ways not previously approved, for instance with a smaller separation distance to the seasonal high water table.

(b) The updated manual shall not be effective in New Hampshire unless and until it is approved in accordance with this section.

(c) To obtain approval of the updated manual, the ITA applicant shall submit 3 copies of the updated manual to the department together with the following:

- (1) A copy of the original ITA;
- (2) All operational reports, patent information, technical reports, and laboratory reports published on the technology subsequent to the original application, even if the information might in whole or in part reflect negatively on the technology; and
- (3) The details on how the updated manual differs from the original manual, and why the manufacturer is proposing the changes.

(d) The department shall approve the updated manual if the department determines that a system built following the updated design manual will meet the criteria specified in Env-Wq 1024.08(c).

(e) If the department approves the updated manual, it shall:

- (1) Notify the ITA applicant in writing; and
- (2) Post on its web site a notice that the updated manual has been approved.

(f) If the department determines that the updated manual does not meet the criteria specified in (d), above, the department shall:

- (1) Notify the applicant, in writing, of the denial and the specific reason(s) for the decision; and
- (2) Post on its web site a notice that the updated manual has not been approved.

(g) The notice posted pursuant to (e)(2) or (f)(2), above, shall include the date of the most recently-approved manual.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

PART Env-Wq 1025 WATERFRONT PROPERTY SITE ASSESSMENT STUDY

Env-Wq 1025.01 Conduct and Documentation of Site Assessment Study.

(a) Pursuant to RSA 485-A:39, I, prior to the execution of a purchase and sale agreement for any developed waterfront property, the owner shall hire an individual as specified in Env-Wq 1025.02 to conduct a site assessment study of the property to determine whether the property meets the standards for ISDS established in Env-Wq 1000.

(b) The site assessment study shall:

- (1) Include an on-site inspection of the property; and
- (2) Not constitute an evaluation of the existing ISDS on the property, if any.

(c) The individual conducting the site assessment study shall document the site assessment study by completing a “Site Assessment Form” obtained from the department.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1025.02 Site Assessors.

(a) Subject to (b), below, all site assessment studies shall be conducted by a permitted designer.

(b) If the design flow of the existing ISDS on the site to be assessed is greater than 2,500 GPD, the assessor shall also be a civil or sanitary engineer licensed in the state of New Hampshire.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1025.03 Site Assessment Form: Availability. Copies of the blank site assessment form may be obtained upon request to the public information and permitting office of the department.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1025.04 Site Assessment Form: Content. The permitted designer shall complete the site assessment form with the following information:

- (a) The name, mailing address, and daytime telephone number of the current owner of the property;
- (b) The name, mailing address, and daytime telephone number of the current property owner’s agent for purposes of the sale;
- (c) The name, mailing address, daytime telephone number, and permit number of the permitted designer who is conducting the site assessment study;
- (d) The location of the property being assessed, including the city or town in which the property is located, the tax map and lot number, street address, and subdivision name;
- (e) A brief description of the property and any structures thereon, including the number of bedrooms;
- (f) The name and mailing address of each abutter to the property, if known;
- (g) The lot size in square feet;

- (h) The slope of the lot;
- (i) The loading capacity of the lot, calculated based on lot size, slope, and soil type;
- (j) The type of water supply to the lot;
- (k) The soil type from U.S. Natural Resources Conservation Service maps or actual data, if available;
- (l) The estimated seasonal high water table from USDA/NRCS maps or actual data, if available;
- (m) Identification of plans and other written materials reviewed and the date of the on-site investigation;
- (n) The assessor's opinion as to whether the site can support a system meeting current specifications for new construction or expanded use as described in Env-Wq 1004.16(a) or (b);
- (o) Whether the property currently has any ISDS; and
- (p) Whether the existing ISDS is state-approved and, if so, the approval number.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1025.05 Attachments to Site Assessment Form.

- (a) If the existing ISDS is state approved, the approval number and a copy of the approved plan, construction approval and operational approval shall be attached to the original of the form by the permitted designer.
- (b) If the existing ISDS is not state approved, the owner shall provide all available information on the type, capacity, age, and location of the ISDS.
- (c) Whether the ISDS is state approved or not, a site assessment sketch that meets the requirements of Env-Wq 1025.06 shall be attached to and made part of the site assessment form.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1025.06 Site Assessment Sketch.

- (a) The site assessment sketch shall be an 8-1/2 inch by 11 inch sketch, to scale or with dimensions shown, that shows the location of the following:
 - (1) Approximate property lines;
 - (2) All structures on the property;
 - (3) The existing ISDS on the property;
 - (4) Abutters' septic systems; and
 - (5) Wells on the property assessed and abutters' lots, if known, with a 75-foot well radius shown around each well.

- (b) A site assessment sketch shall not be deemed to be a precise survey of the property.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1025.07 Site Assessment Study Updates.

(a) For a subsequent sale of a developed waterfront property for which a site assessment study has been conducted for a previous sale and upon which no change in the information required by Env-Wq 1025.04(d), (e), (g) through (l), or (n) through (p) has occurred, the property owner and assessor may certify that no change in the information required has occurred in lieu of conducting a new site assessment.

(b) The updated certification shall be attached to the original site assessment study, if available, or to a copy of the original site assessment study, and the updated site assessment study shall be made available to prospective buyers of the property in the same manner as original site assessment studies.

(c) The update to the site assessment study shall contain the following information:

- (1) The name, mailing address, and daytime telephone number of the current owner of the property;
- (2) The name, mailing address, and daytime telephone number of the owner's agent for purposes of the sale;
- (3) The name, mailing address, daytime telephone number, and permit number of the designer who reviewed the site assessment study; and
- (4) The name and mailing address of each abutter to the property, if known.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

Env-Wq 1025.08 Signature of Buyer(s) Required. The buyer(s) shall agree to and sign the following statement on the "Site Assessment Form" or on the update to the Site Assessment Form, if applicable, at the time of the closing:

I/we certify that I/we have reviewed this Site Assessment Form and understand the information contained herein and that I/we have received a copy of this Site Assessment Form.

Source. (See Revision Note at chapter heading for Env-Wq 1000) #9086, eff 2-9-08

NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES

APPENDIX

Rule Section(s)	Specific Statute(s) Implemented
Env-Wq 1001.01	RSA 485-A:1
Env-Wq 1001.02	RSA 485-A:41, IV; RSA 541-A :22, IV ; RSA 485-A:30-a
PART Env-Wq 1002	RSA 485-A:2; RSA 485-A:29, I
Env-Wq 1003.01	RSA 485-A:29, I
Env-Wq 1003.02	RSA 485-A:31 and RSA 485-A:29, I
Env-Wq 1003.03 through Env-Wq 1003.06	RSA 485-A:29, I
Env-Wq 1003.07	RSA 485-A:35, I
Env-Wq 1003.08	RSA 485-A:35, II
Env-Wq 1003.09	RSA 485-A:29, I
Env-Wq 1003.10	RSA 485-A:29, I and RSA 485-A:35, I
Env-Wq 1003.11 through Env-Wq 1003.15	RSA 485-A:29, I
Env-Wq 1003.16	RSA 485-A:30-a
Env-Wq 1003.17	RSA 485-A:29, I
Env-Wq 1003.18	RSA 485-A:30-a and RSA 485-A:31
Env-Wq 1003.19 and Env-Wq 1003.20	RSA 485-A:41 and RSA 485-A: 30-a
Env-Wq 1003.21	RSA 485-A:30-b
Env-Wq 1003.22	RSA 485-A:29, I
Env-Wq 1004.01 through Env-Wq 1004.03	RSA 485-A:29, I
Env-Wq 1004.04	RSA 485-A:32
Env-Wq 1004.05 through Env-Wq 1004.15	RSA 485-A:29, I
Env-Wq 1004.16 through Env-Wq 1004.18	RSA 485-A:38
Env-Wq 1004.19	RSA 485-A:30
Env-Wq 1004.20	RSA 485-A:29, I
Env-Wq 1005.01	RSA 485-A:29, I
Env-Wq 1005.02 through Env-Wq 1005.04	RSA 485-A:34
Env-Wq 1005.05	RSA 485-A:30-b, III
Env-Wq 1005.06 and Env-Wq 1005.07	RSA 485-A:29, I
Env-Wq 1005.08	RSA 485-A:34
Env-Wq 1005.09 through Env-Wq 1005.12	RSA 485-A:29, I
PART Env-Wq 1006	RSA 485-A:29, I and RSA 485-A:34, I
PART Env-Wq 1007	RSA 485-A:29, I and RSA 485-A:34, I
Env-Wq 1008.01 through Env-Wq 1008.07	RSA 485-A:30-b
Env-Wq 1008.08	RSA 485-A:30-b, I (b) and (c)
Env-Wq 1008.09	RSA 485-A:30-b, II
Env-Wq 1008.10	RSA 485-A:30-b, I(d),(e),(f), (g)
Env-Wq 1008.11 and Env-Wq 1008.12	RSA 485-A:30-b, I(g)
PART Env-Wq 1009	RSA 485-A:29, I
PART Env-Wq 1010	RSA 485-A:29, I
PART Env-Wq 1011	RSA 485-A:29, I
PART Env-Wq 1012	RSA 485-A:29, I
PART Env-Wq 1013	RSA 485-A:29, I
PART Env-Wq 1014	RSA 485-A:34
PART Env-Wq 1015	RSA 485-A:29, I

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Env-Wq 1016.01	RSA 485-A:34
Env-Wq 1016.02	RSA 485-A:29, I
Env-Wq 1016.03 through Env-Wq 1016.05	RSA 485-A:34
Env-Wq 1016.06 and Env-Wq 1016.07	RSA 485-A: 29, I and RSA 485-A:34
Env-Wq 1016.08 and Env-Wq 1016.09	RSA 485-A:34
PART Env-Wq 1017	RSA 485-A:29, I and RSA 485-A:34
PART Env-Wq 1018	RSA 485-A:29, I
PART Env-Wq 1019	RSA 485-A:29, I
PART Env-Wq 1020	RSA 485-A:29, I
PART Env-Wq 1021	RSA 485-A:29, I
PART Env-Wq 1022	RSA 485-A:29, I
PART Env-Wq 1023	RSA 485-A:34, III and RSA 485-A:37
PART Env-Wq 1024	RSA 485-A:29, I
PART Env-Wq 1025	RSA 485-A:39